

STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE DEPARTMENT OF HEALTH

In the Matter of the Proposed Rules of  
the Department of Health Governing  
Air Quality in Enclosed Sports Arenas,  
Minnesota Rules Chapter 4620, Parts  
3900 to 5950

**REPORT OF THE CHIEF  
ADMINISTRATIVE LAW JUDGE**

The above-entitled matter came on for review by the Chief Administrative Law Judge pursuant to the provisions of Minn. Stat. § 14.15, subds. 3 and 4. Based upon a review of the record in this proceeding, the Chief Administrative Law Judge hereby approves the Report of the Administrative Law Judge in all respects.

In order to correct the defects enumerated by the Administrative Law Judge, the agency shall either take the action recommended by the Administrative Law Judge, follow the procedure for adopting substantially different rules or reconvene the rule hearing if appropriate. If the agency chooses to reconvene the rule hearing, it shall do so as if it is initiating a new rule hearing, complying with all substantive and procedural requirements imposed on the agency by law or rule. The procedure for adopting substantially different rules is set out in Minn. Rule 1400.2110.

If the agency chooses to take the action recommended by the Administrative Law Judge, it shall submit to the Chief Administrative Law Judge a copy of the rules as initially published in the State Register, a copy of the rules as proposed for final adoption in the form required by the State Register for final publication, and a copy of the agency's Order Adopting Rules. The Chief Administrative Law Judge will then make a determination as to whether the defects have been corrected and whether the modifications in the rules are substantially different.

Should the agency make changes in the rules other than those recommended by the Administrative Law Judge, it shall also submit the complete record to the Chief Administrative Law Judge for a review on the issue of substantial difference.

Dated this 8<sup>th</sup> day of February, 2013.



RAYMOND R. KRAUSE  
Chief Administrative Law Judge

STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE DEPARTMENT OF HEALTH

In the Matter of the Proposed Rules of the  
Department of Health Governing Air Quality in  
Enclosed Sports Arenas, Minnesota Rules  
Chapter 4620, Parts 3900 to 5950

**REPORT OF THE  
ADMINISTRATIVE LAW JUDGE**

Administrative Law Judge Barbara L. Neilson conducted a hearing in this rulemaking proceeding commencing at 9:00 a.m. on November 13, 2012, at the Orville Freeman Building, Room B-107, St. Paul, Minnesota. The hearing continued until everyone present had an opportunity to be heard concerning the proposed rules.

The hearing and this Report are part of a rulemaking process governed by the Minnesota Administrative Procedure Act.<sup>1</sup> The legislature has designed the rulemaking process to ensure that state agencies have met all the requirements that Minnesota law specifies for adopting rules. Those requirements include assurances that the proposed rules are necessary and reasonable and that any modifications that the agency made after the proposed rules were initially published do not result in the rules being substantially different from what the agency originally proposed. The rulemaking process also includes a hearing when a sufficient number of persons request one or when ordered by the agency. The hearing is intended to allow the agency and the Administrative Law Judge reviewing the proposed rules to hear public comment regarding the impact of the proposed rules and what changes might be appropriate.

Patricia Winget, Attorney and Rules Coordinator for the Department of Health, represented the Minnesota Department of Health (MDH or the Department) at the hearing. The members of the Department's hearing panel included John D. Olson, Indoor Air Program Enforcement Coordinator; Dan Tranter, Supervisor of the Indoor Air Unit; and Linda B. Bruemmer, Director of the Environmental Health Division. Approximately thirty-five individuals attended the hearing.

The Department received written comments on the proposed rules prior to the hearing. After the hearing, the Administrative Law Judge kept the administrative record open for an additional twenty calendar days, until December 3, 2012, to allow interested persons and the Department to submit written comments. Thereafter, the record remained open for an additional five business days, until December 10, 2012, to allow interested persons and the Department to file a written response to any comments

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<sup>1</sup> Minn. Stat. §§ 14.131 through 14.20.

received during the initial comment period.<sup>2</sup> Approximately thirty written comments were received after the hearing and considered during the rulemaking process, along with two responses from the Department. To aid the public in participating in this matter, comments were posted on the Department's website shortly after they were received. The hearing record closed for all purposes on December 10, 2012.<sup>3</sup>

## NOTICE

The Department must make this Report available for review by anyone who wishes to review it for at least five working days before the Department takes any further action to adopt final rules or to modify or withdraw the proposed rules. If the Department makes changes in the rules other than those recommended in this report, it must submit the rules, along with the complete hearing record, to the Chief Administrative Law Judge for a review of those changes before it may adopt the rules in final form.

Because the Administrative Law Judge has determined that the proposed rules are defective in certain respects, state law requires that this Report be submitted to the Chief Administrative Law Judge for his approval. If the Chief Administrative Law Judge approves the adverse findings contained in this Report, he will advise the Department of actions that will correct the defects, and the Department may not adopt the rules until the Chief Administrative Law Judge determines that the defects have been corrected. However, if the Chief Administrative Law Judge identifies defects that relate to the issues of need or reasonableness, the Department may either adopt the actions suggested by the Chief Administrative Law Judge to cure the defects or, in the alternative, submit the proposed rules to the Legislative Coordinating Commission for the Commission's advice and comment. The Department may not adopt the rules until it has received and considered the advice of the Commission. However, the Department is not required to wait for the Commission's advice for more than 60 days after the Commission has received the Department's submission.

If the Department elects to adopt the actions suggested by the Chief Administrative Law Judge and make no other changes and the Chief Administrative Law Judge determines that the defects have been corrected, it may proceed to adopt the rules. If the Department makes changes in the rules other than those suggested by the Administrative Law Judge and the Chief Administrative Law Judge, it must submit copies of the rules showing its changes, the rules as initially proposed, and the proposed order adopting the rules to the Chief Administrative Law Judge for a review of those changes before it may adopt the rules in final form.

After adopting the final version of the rules, the Department must submit them to the Revisor of Statutes for a review of their form. If the Revisor of Statutes approves the form of the rules, the Revisor will submit certified copies to the Administrative Law Judge, who will then review them and file them with the Secretary of State. When they

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<sup>2</sup> See Minn. Stat. § 14.15, subd. 1.

<sup>3</sup> The Chief Administrative Law Judge extended the time period for issuance of the Administrative Law Judge's Report on this rule.

are filed with the Secretary of State, the Administrative Law Judge will notify the Department, and the Department will notify those persons who requested to be informed of their filing.

Based upon all the testimony, exhibits, and written comments, the Administrative Law Judge makes the following:

## **FINDINGS OF FACT**

### **Nature of the Proposed Rules**

1. The Department regulates the air quality in enclosed sports arenas to protect the public from exposure to harmful levels of combustion byproducts. In indoor ice arenas, the equipment that is used to resurface and edge the ice typically is powered by internal combustion engines. The anticipated conversion to the use of electrically-powered ice maintenance equipment has been slow in coming due to the high cost and limited availability of such equipment, and the majority of ice arenas continue to rely on equipment powered by internal combustion engines fueled by gasoline or propane. By their very nature, events hosted at indoor motorsports arenas feature internal combustion vehicles such as monster trucks and motocross motorcycles. In both types of arenas, carbon monoxide and nitrogen dioxide are emitted as a byproduct of internal combustion.<sup>4</sup>

2. The Department has regulated air quality in enclosed sports arenas since 1973, when the Minnesota State Board of Health first adopted enclosed sports arena rules. These rules were revised in 1977, primarily to comply with a new rule numbering scheme.<sup>5</sup> The existing rules require that arenas be certified by the Department, maintain acceptable air quality, measure carbon monoxide and nitrogen dioxide concentrations on regular basis, and take corrective action when contaminant levels exceed established action levels. The existing rules only minimally address motorsports facilities and events.<sup>6</sup>

3. In this rulemaking proceeding, the Department proposes to revise parts 4620.3900 through 4620.4800 of the existing rules (pertaining to indoor ice arenas) and add new rule parts 4620.5000 through 4620.5950 (pertaining to indoor motorsports arenas). According to the Department, the proposed rules clarify air monitoring and documentation requirements; ensure that information from current published studies on the health risks of combustion byproducts are incorporated into appropriate action levels; separate the rules into distinct sections for ice arenas and motorsports arenas and events; prescribe more specific requirements for motorsports events and routine operation of indoor motorsports arenas; and recognize the use of modern air-monitoring technology without requiring a variance or special approval.<sup>7</sup>

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<sup>4</sup> SONAR at 4.

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> *Id.* at 5.

## Rulemaking Legal Standards

4. Under Minnesota law, one of the determinations that must be made in a rulemaking proceeding is whether the agency has established the need for and reasonableness of the proposed rules by an affirmative presentation of facts.<sup>8</sup> In support of a rule, an agency may rely on legislative facts, namely general facts concerning questions of law, policy and discretion, or it may simply rely on interpretation of a statute, or stated policy preferences.<sup>9</sup> The Department prepared a Statement of Need and Reasonableness (SONAR) in support of its proposed rules. At the hearing, the Department primarily relied upon the SONAR as its affirmative presentation of facts in support of the proposed rules. The SONAR was supplemented by the Department's written post-hearing submissions and by comments made by members of the Agency Panel during the public hearing.

5. The question of whether a rule has been shown to be reasonable focuses on whether it has been shown to have a rational basis, or whether it is arbitrary, based upon the rulemaking record. Minnesota case law has equated an unreasonable rule with an arbitrary rule.<sup>10</sup> Arbitrary or unreasonable agency action is action without consideration and in disregard of the facts and circumstances of the case.<sup>11</sup> A rule is generally found to be reasonable if it is rationally related to the end sought to be achieved by the governing statute.<sup>12</sup> The Minnesota Supreme Court has further defined an agency's burden in adopting rules by requiring it to "explain on what evidence it is relying and how the evidence connects rationally with the agency's choice of action to be taken."<sup>13</sup>

6. Reasonable minds might be divided about the wisdom of a certain course of action. An agency is legally entitled to make choices between possible approaches so long as its choice is rational. It is not the role of the Administrative Law Judge to determine which policy alternative presents the "best" approach, since this would invade the policy-making discretion of the agency. The question is, rather, whether the choice made by the agency is one that a rational person could have made.<sup>14</sup>

7. In addition to need and reasonableness, the Administrative Law Judge must also assess whether the Department complied with the rule adoption procedure, whether the proposed rules grant undue discretion, whether the Department has statutory authority to adopt the rules, whether the rules are unconstitutional or illegal,

<sup>8</sup> Minn. Stat. § 14.14, subd. 2; Minn. R. 1400.2100.

<sup>9</sup> *Mammenga v. Dept. of Human Services*, 442 N.W.2d 786 (Minn. 1989); *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d 238, 244 (Minn. 1984).

<sup>10</sup> *In re Hanson*, 275 N.W.2d 790 (Minn. 1978); *Hurley v. Chaffee*, 231 Minn. 362, 43 N.W.2d 281, 284 (1950).

<sup>11</sup> *Greenhill v. Bailey*, 519 F.2d 5, 19 (8<sup>th</sup> Cir. 1975).

<sup>12</sup> *Mammenga*, 442 N.W.2d at 789-90; *Broen Mem'l Home v. Minnesota Dept. of Human Services*, 364 N.W.2d 436, 444 (Minn. Ct. App. 1985).

<sup>13</sup> *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d at 244.

<sup>14</sup> *Federal Sec. Adm'r v. Quaker Oats Co.*, 318 U.S. 218, 233 (1943).

whether the rules involve an undue delegation of authority to another entity, or whether the proposed language is not a rule.<sup>15</sup>

8. If changes to the proposed rule are made by the Agency or suggested by the Administrative Law Judge after original publication of the rule language in the State Register, it is also necessary for the Administrative Law Judge to determine if the new language is substantially different from that which was originally proposed. The standards to determine whether changes to proposed rules create a substantially different rule are found in Minn. Stat. § 14.05, subd. 2. The statute specifies that a modification does not make a proposed rule substantially different if the differences are within the scope of the matter announced in the notice of hearing and are in character with the issues raised in that notice; the differences are a logical outgrowth of the contents of the notice of hearing and the comments submitted in response to the notice; and the notice of hearing provided fair warning that the outcome of that rulemaking proceeding could be the rule in question.<sup>16</sup>

9. In reaching a determination regarding whether modifications result in a rule that is substantially different, the Administrative Law Judge is to consider whether persons who will be affected by the rule should have understood that the rulemaking proceeding could affect their interests; whether the subject matter of the rule or issues determined by the rule are different from the subject matter or issues contained in the notice of hearing; and whether the effects of the rule differ from the effects of the proposed rule contained in the notice of hearing.<sup>17</sup>

#### **Procedural Requirements of Chapter 14**

10. The Minnesota Administrative Procedure Act<sup>18</sup> and the rules of the Office of Administrative Hearings<sup>19</sup> set forth certain procedural requirements that are to be followed during agency rulemaking.

11. By letter dated September 4, 2009, the Department requested that the Office of Administrative Hearings review and approve its Additional Notice Plan for publishing a Request for Comments. By letter dated September 14, 2009, Administrative Law Judge Eric L. Lipman approved the Additional Notice Plan.<sup>20</sup>

12. On October 19, 2009, the Department published a Request for Comments on Proposed Amendment to Rules Governing Indoor Air Quality in the Operation and Maintenance of Enclosed Sports Arenas in the State Register. The Request for Comments was published at 34 State Reg. 554.<sup>21</sup>

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<sup>15</sup> Minn. R. 1400.2100.

<sup>16</sup> Minn. Stat. §14.05, subd. 2(b).

<sup>17</sup> Minn. Stat. § 14.05, subd. 2l.

<sup>18</sup> The provisions of the Act relating to agency rulemaking are codified in Minn. Stat. §§ 14.001-14.47.

<sup>19</sup> The OAH rules governing rulemaking proceedings are set forth in Minnesota Rules part 1400.2000 through 1400.2240.

<sup>20</sup> Ex. H.

<sup>21</sup> Ex. A.

13. On January 18, 2011, the Department informed the OAH that it had determined that the Department should split the existing rules into two distinct rule sets, one for ice arenas and one for motor sports, and was revising its Additional Notice Plan to accommodate this new regulatory scheme.

14. On January 24, 2011, the OAH returned the Department's January 18, 2011, correspondence based upon its understanding that the Department would request approval of its Amended Additional Notice Plan at the time it was ready to publish its Notice of Intent to Adopt Rules.

15. On August 14, 2012, the Department asked the Commissioner of the Minnesota Management & Budget to evaluate the fiscal impact and benefits of the proposed rules on local units of government, as required by Minn. Stat. § 14.131.<sup>22</sup>

16. On August 21, 2012, the Department filed with the Office of Administrative Hearings a proposed notice of its intent to adopt the rules without a public hearing unless 25 or more persons request a hearing, and its intent to adopt the rules with a public hearing if a sufficient number of persons requested a hearing (Dual Notice). The Department also filed a copy of the proposed rules and a draft of the SONAR and requested approval of its Amended Additional Notice Plan.

17. On August 29, 2012, Administrative Law Judge Eric L. Lipman approved the Department's Additional Notice Plan. The Dual Notice of Hearing was also approved.

18. On August 30, 2012, the Department electronically sent a copy of the SONAR to the Legislative Reference Library as required by law.<sup>23</sup>

19. On August 30, 2012, the Department mailed copies of the Dual Notice and the SONAR to the Chairs and Ranking Minority Members of the Senate and House and to the Legislative Coordinating Commission.<sup>24</sup>

20. On August 30, 2012, the Department mailed the Dual Notice to all persons and associations on its Rulemaking List. On August 30 and September 5, 2012, the Department also gave notice in accordance with the Amended Additional Notice Plan.<sup>25</sup>

21. In a memorandum dated September 6, 2012, Emily Engel, Executive Budget Officer for Minnesota Management & Budget, noted that she had reviewed the Department's proposed rule amendments and SONAR and evaluated the fiscal impact and benefits of the proposed rules with respect to local governments. Ms. Engel concluded that the proposed rule amendments "will add obligations for local units of government that own or operate enclosed sports arenas. The majority of this impact, however, will be one-time but not immaterial (up to \$25,000)." Ms. Engel further

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<sup>22</sup> Ex. K.

<sup>23</sup> Ex. E.

<sup>24</sup> Ex. K.

<sup>25</sup> Ex. F; Ex. H.

determined that "cities will incur ongoing equipment maintenance and training costs but these will be significantly less."<sup>26</sup>

22. On September 10, 2012, the Department published the Dual Notice in the State Register at 37 State Reg. 354.<sup>27</sup>

23. More than 25 persons requested that a hearing be held on the proposed rules.

24. On November 2, 2012, the Department notified all persons who had requested a hearing that a hearing would, in fact, be held.<sup>28</sup>

25. The hearing on the proposed rules was held on November 13, 2012, in St. Paul, Minnesota. During the hearing, the following documents were received into the hearing record:

- A. the Request for Comments as published in the State Register on October 19, 2009 (34 State Reg. 554);<sup>29</sup>
- B. a copy of the proposed rules dated August 14, 2012, including the Revisor's approval;<sup>30</sup>
- C. a copy of the SONAR;<sup>31</sup>
- D. the Certificate of Mailing a copy of the SONAR to the Legislative Reference Library on August 30, 2012;<sup>32</sup>
- E. a copy of the Department's Dual Notice as published in the State Register on September 10, 2012 (37 State Reg. 358);<sup>33</sup>
- F. certificates attesting to the accuracy of the Department's mailing list and attesting that the Dual Notice was sent via mail or electronically to all persons and associations on the Department's rulemaking list on August 30, 2012;<sup>34</sup>
- G. copies of the September 2, 2009, Additional Notice Plan; the Department's September 4, 2009, request for approval of the 2009 Additional Notice Plan; the OAH's September 14, 2009, letter approving the 2009 Additional Notice Plan; the Department's January 18, 2011, request for review and approval of an Amended

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<sup>26</sup> Ex. K.

<sup>27</sup> Ex. F.

<sup>28</sup> Ex. K.

<sup>29</sup> Ex. A.

<sup>30</sup> Ex. C.

<sup>31</sup> Ex. D.

<sup>32</sup> Ex. E.

<sup>33</sup> Ex. F.

<sup>34</sup> Ex. G.



Additional Notice Plan (later withdrawn); the Department's August 21, 2012, request for review and approval of the Amended Additional Notice Plan; and the OAH's August 29, 2012, letter with attached Order approving the Amended Additional Notice Plan;<sup>35</sup>

- H. a certificate attesting that, on September 21, 2009, the Department gave notice of scheduled public information meetings and its intention to publish a Request for Comments to all persons and organizations on the Department's rulemaking list and to those identified in the 2009 Additional Notice Plan;<sup>36</sup>
- I. a certificate attesting that, on June 18, 2010, the Department gave notice of the availability of a Department web page dedicated to the proposed rule revision to parties affected by and interested in the proposed rules;<sup>37</sup>
- J. certificates attesting that, on August 30, 2012, and September 5, 2012, the Department gave notice of the proposed rules and the Dual Notice to all individuals and organizations identified in the Amended Additional Notice Plan;<sup>38</sup>
- K. a certificate attesting that the Department consulted with the Commissioner of Minnesota Management and Budget regarding the proposed rules on August 14, 2012, and a copy of the September 6, 2012, memorandum of Emily Engel, Executive Budget Officer, Minnesota Management and Budget, regarding the fiscal impact and benefits of the proposed rules with respect to local governments;<sup>39</sup>
- L. a certificate attesting that, on August 30, 2012, the Department sent the Dual Notice and SONAR to the Legislative Coordinating Commission and the Chairs and Ranking Minority Members of the Senate and House Health and Human Services and Finance Committees, along with a copy of the transmittal letter;<sup>40</sup> and
- M. a certificate attesting that, on November 2, 2012, the Department sent a notice confirming that the hearing would be held to all persons who requested a hearing.<sup>41</sup>

26. The Administrative Law Judge finds that the Department has met the procedural requirements imposed by applicable law and rules.

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<sup>35</sup> Ex. H.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> Ex. K.

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

## Additional Notice

27. Minn. Stat. §§ 14.131 and 14.23 require that the SONAR contain a description of the Department's efforts to provide additional notice to persons who may be affected by the proposed rules.

28. In its SONAR, the Department indicated that it had posted the Request for Comments, the proposed rules, and information regarding how to submit comments on the Department's webpage; held four regional public information meetings in Bemidji, St. Paul, St. Cloud, and Mankato in October and November of 2009 to allow the public opportunity to provide comments and suggestions regarding the proposed rules; and mailed a notice of the public information meetings and the publication of the Request for Comments to numerous entities, including certified enclosed sports arena owner/operators, businesses that promote and manage regulated indoor motorsports events, trade organizations for ice arena managers, companies that manufacture or distribute products for measuring indoor air quality, Minnesota hockey and figure skating associations, and persons on the Department's rulemaking list.<sup>42</sup>

29. The Department created a website dedicated to the proposed rules and sent electronic notice to affected and interested parties. The website has separate links to the Request for Comments, the text of the proposed rules, and the SONAR, and includes a link for viewers to sign up for automatic electronic notification when the pages are updated, as well as directions and links for individuals to submit comments on the proposed rules.<sup>43</sup>

30. As noted above, the Department also certified that it had provided notice of the proposed rules and the SONAR to all individuals and organizations included on the Department's rulemaking mailing list as well as the 200 facilities that house Department-certified enclosed sports arenas, all persons who registered for electronic notification of rulemaking activities on the Department's electronic notification system, hockey and figure skating associations, and other persons and entities identified as interested or affected parties in the OAH-approved Amended Additional Notice Plan.<sup>44</sup>

31. The Department further noted in the SONAR that it held a series of meetings in Bemidji, St. Cloud, Mankato, and St. Paul during the fall of 2009 to inform regulated persons and affected stakeholders of the problems with the existing rule, notify them of the Department's intention to adopt revisions to the rules, and provide them an informal opportunity to provide comments. The Department also appointed an advisory committee to consider and provide recommendations regarding both the ice arena and indoor motorsports rules, and a separate subcommittee to provide advice regarding the contaminant action levels.<sup>45</sup>

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<sup>42</sup> SONAR at 15-16.

<sup>43</sup> *Id.* at 16.

<sup>44</sup> *Id.*; Exs. G and H.

<sup>45</sup> SONAR at 5.

32. The Administrative Law Judge finds that the Department has fulfilled its additional notice requirements.

### **Statutory Authority**

33. The Department relies upon Minn. Stat. § 144.1222, subd. 3, as the primary source of its statutory authority to adopt these rules. This statute, which was enacted in 1995,<sup>46</sup> states, "The commissioner of health shall be responsible for the adoption of rules and enforcement of applicable laws and rules relating to indoor air quality in the operation and maintenance of enclosed sports arenas."

34. The Department also asserts that additional authority is implicit in Minn. Stat. § 144.0751(a), which was enacted in 2001<sup>47</sup> and specifies:

Safe drinking water or air quality standards established or revised by the commissioner of health must:

- (1) be based on scientifically acceptable, peer-reviewed information; and
- (2) include a reasonable margin of safety to adequately protect the health of infants, children, and adults by taking into consideration risks to each of the following health outcomes: reproductive development and function, respiratory function, immunologic suppression or hypersensitization, development of the brain and nervous system, endocrine (hormonal) function, cancer, general infant and child development, and any other important health outcomes identified by the commissioner.

The Department contends that the rule revision falls within this statutory provision because the rules will set the levels of carbon monoxide and nitrogen dioxide that will require the evacuation of arenas and the Department will enforce these levels through proposed actions. The Department further asserts that the rules are based upon scientific information and the Department's analysis of some of the health effects listed in the statute.<sup>48</sup>

35. It appears the Department has further statutory authority to adopt the proposed rules under Minn. Stat. § 144.12(14). That provision authorizes the Commissioner of Health to "adopt reasonable rules pursuant to Chapter 14 for the preservation of the public health" and specifies that one of the matters that may be controlled by the Commissioner is "atmospheric pollution which may be injurious or detrimental to public health."

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<sup>46</sup> 1995 Laws of Minnesota, Chapter 165, Section 1.

<sup>47</sup> First Special Session 2001, Chapter 9, Article 1, Section 27.

<sup>48</sup> SONAR at 9.

36. The Administrative Law Judge concludes that the Department has statutory authority to adopt the proposed rules.

### **Impact on Farming Operations**

37. Minn. Stat. § 14.111 imposes an additional requirement calling for notification to be provided to the Commissioner of Agriculture when rules are proposed that affect farming operations. In addition, where proposed rules affect farming operations, Minn. Stat. § 14.14, subd. 1b, requires that at least one public hearing be conducted in an agricultural area of the state.

38. There is no indication that the proposed rules will affect farming operations in any way. Accordingly, the Administrative Law Judge concludes that it was not necessary for the Department to provide notice to the Commissioner of Agriculture under Minn. Stat. § 14.14, subd. 1b.

### **Regulatory Analysis in the SONAR**

39. The version of Minn. Stat. § 14.131 relevant to this rulemaking proceeding requires an agency adopting rules to consider eight factors in its Statement of Need and Reasonableness.<sup>49</sup> Each of these factors, and the Department's analysis, are discussed below.

40. The first factor requires "a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule." In its SONAR, the Department indicated that the proposed rule will affect owners and operators of indoor ice arenas and indoor motorsports arenas and events. The Department noted that, of the 274 indoor ice arenas in Minnesota, 221 use at least one combustion-powered ice maintenance machine while the remaining 53 arenas primarily use electric ice maintenance machines. The Department indicated that most facilities are owned by municipalities or nonprofit organizations such as hockey associations. Some are owned by schools and a few are owned by for-profit organizations. The Department has identified three facilities in Minnesota that are dedicated to indoor motorsports racing events, and seven other facilities that have held occasional indoor motorsports events. According to the Department, those who will likely benefit from the indoor ice arena rules are the regular users of arenas (hockey players, figure skaters, coaches, and officials) and the occasional users of arenas (open skating participants and spectators). The Department estimates there are at least 70,000 regular users of indoor ice arenas and an additional, probably much larger, number of occasional users. With respect to the indoor motorsports rules, the Department indicated that those likely

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<sup>49</sup> The statute was amended effective August 1, 2012, to include an eighth factor requiring "an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule." See 2012 Laws of Minn., Chapter 238, Section 2.

to benefit are spectators and the unpaid participants in motorsports racing. Finally, employees of arenas will also benefit from improved indoor air-quality.<sup>50</sup>

41. The second factor requires consideration of "the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues." In the SONAR, the Department stated that there will be no additional cost to the Department or to any other agency to implement or enforce the proposed rule revisions. The Department already has staff in place to enforce the existing rules. Because there are no fee increases for current registrants or service providers, the Department does not anticipate that these proposed rules would have any effect on state revenues.<sup>51</sup>

42. The third factor requires "a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule." The Department stated in the SONAR that "there are no less costly methods or less intrusive methods for achieving the purpose of the proposed rules." The Department noted that three changes in the proposed rules carry potential costs:

- **More Frequent Air Testing:** The Department estimated that some arenas will incur increased costs of \$600 or more to purchase the testing equipment necessary to conduct the proposed routine air testing, but asserted that the proposed rules incorporate flexibility by allowing arenas to obtain electronic instruments to monitor air levels of carbon monoxide and nitrogen dioxide without special approval and permitting owners or operators to use the real-time testing equipment of their choosing as long as the equipment meets certain technical specifications. The Department acknowledged that, for most arenas, the testing frequency will increase from once per week to three times per week. The Department indicated that some arenas are likely to use electronic instruments rather than single-use disposable devices because the latter would be less economical when testing more frequently than once a week. According to the Department, the cost of the electronic instruments for most arenas would be comparable to or less than the cost of single-use disposable colorimetric tubes. The Department estimated there would be a small increased cost for arenas that are only open a few months per year due to the more frequent testing required by the proposed rules. The Department indicated that it cannot identify a less costly alternative without eliminating the more frequent air testing provision of the proposed rules.<sup>52</sup>
- **Training of Arena Staff:** The Department indicated that another potential expense of the proposed rules is training. Although it will be essential to have trained responsible staff at arenas, the Department

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<sup>50</sup> SONAR at 9-10.

<sup>51</sup> *Id.* at 10.

<sup>52</sup> *Id.*

pointed out that formal training course attendance will not be required and arena managers will be able to train their own employees and incur only the costs associated with staff time. The Department indicated that it incorporated this flexibility into the proposed rules in part to minimize costs and intrusion. The Department stated that it could not identify a less costly or intrusive alternative without eliminating this provision of the proposed rules.<sup>53</sup>

- Lower Air Quality Action Levels: For ice arenas that cannot maintain acceptable air quality under the proposed lower air quality limits, there will be costs for reducing engine emissions or increasing ventilation. The Department indicated that it considered the economic impact to arenas when establishing the air-quality limits. It noted that arenas will have the flexibility to identify the least costly methods of maintaining acceptable air quality for their facility. The Department noted that it could not identify a less costly or intrusive alternative without raising the acceptable air quality standards which it has determined are necessary to protect public health.<sup>54</sup>

43. The fourth factor requires “a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule.” The Department stated in its SONAR that it considered whether both carbon monoxide and nitrogen dioxide should continue to be tested, whether significant differences exist between types of engines, and whether testing for additional pollutants was warranted. After investigating these issues, the Department determined that it was necessary to test for both pollutants, regardless of engine fuel, and it would not propose to regulate particulate matter or other combustion byproducts. The Department also considered simply amending the current rule rather than proposing two separate sets of rules, but decided that separate rules not only made sense given the many differences between ice arenas and motorsports arenas but also would make the requirements easier to find and reduce confusion among those subject to the rules. The Department considered a variety of prescriptive requirements, such as requiring specific routine engine maintenance and tailpipe emission testing, emission control technology, specific mechanical ventilation rates, and continuous air monitoring systems, or mandating electric-powered ice maintenance equipment. The Department ultimately determined these requirements would be too costly and unnecessarily rigid, and that the proposed rules were the most reasonable approach. Finally, based upon available research, the Department indicated in its SONAR that implementation of a purely voluntary program would likely not be sufficient to protect public health.<sup>55</sup>

44. The fifth factor specifies that the agency must assess “the probable costs of complying with the proposed rule, including the portion of the total costs that will be

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<sup>53</sup> *Id.*

<sup>54</sup> *Id.* at 11.

<sup>55</sup> *Id.* at 11-12.

borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals." In the SONAR, the Department stated that the cost to purchase electronic equipment that satisfies the requirements of the proposed rules is as low as \$600. The Department estimates that yearly maintenance costs would be approximately \$200 and the equipment might need to be replaced after five to ten years. For most arenas, the Department projects that switching to electronic equipment will not increase air testing costs and, for some, the cost will actually decline. The Department asserted that most arenas currently use disposable colorimetric tubes for air testing, which are usually more costly on an annual basis than the electronic alternative. It estimates that only those few facilities with one sheet of ice open for three months a year or would be expected to see an increased cost since they currently spend only about \$200 per year for air testing tubes. Over the course of 10 years, assuming equipment is replaced after five years, the Department projects that these arenas might spend about \$100 per year more as a consequence of the proposed rules. The Department noted that the proposed rules require a trained responsible person to be present in the arena at all times and acknowledged that this will require arena staff to devote a few hours per year to training, which can be obtained in a variety of ways. The Department expects this cost to be minimal. Finally, the Department stated in its SONAR that the proposed rules would require ice arenas to comply with lower acceptable air quality action levels, but noted that arena operators can tailor administrative or engineering controls to suit their needs and financial considerations. They may elect to run the ventilation fans more frequently to improve air quality, tune the engines of maintenance equipment, or complete more costly renovations to engines such as installing emission control technology. Overall, the Department does not expect costs to exceed \$25,000 during the first year.<sup>56</sup>

45. The sixth factor requires a description of "the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals." In the SONAR, the Department noted that the primary consequence of not adopting the proposed rules is that the health and safety of the public might be jeopardized. The Department indicated it had determined that the current acceptable air quality limits should be lowered in indoor ice arena and that the current evacuation level should be lowered for both types of arenas to protect public health. It also believes that the existing rules need to be clarified to bring about effective enforcement, and more frequent testing is needed to ensure that acceptable air quality is being maintained. In addition, the Department indicated in the SONAR that the rule changes will simplify or clarify some requirements (such as not requiring special approval to use electronic instruments and setting forth specific follow-up measures required when acceptable air quality limits are exceeded), and noted that this should provide cost savings by reducing the amount time arena operators spend in consultation with the Department.<sup>57</sup>

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<sup>56</sup> *Id.* at 13.

<sup>57</sup> *Id.* at 13.

46. The seventh factor requires "an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference." In the SONAR, the Department stated that there are no existing federal regulations protecting the general public in enclosed motorsports races or ice arenas. Although the Environmental Protection Agency, most Canadian provinces, and a few states have recommended guidelines for ice arenas, only Minnesota, Rhode Island, and Massachusetts regulate air quality in ice arenas. There are some state and federal regulations relating to workplace health and safety that apply to workers in enclosed sports arenas, but these standards do not apply to the public and, in the view of the Department, are not sufficiently protective.<sup>58</sup>

47. The eighth and final factor requires "an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule." The Department reiterated that there are no existing federal rules or regulations in other states addressing the purpose of protecting the general public in enclosed motorsports arenas or ice arenas. According to the Department, the EPA guidelines and OSHA regulations relating to exposure limits for employees do not conflict with or overlap the proposed rules and the proposed rules do not overlap with building codes. Accordingly, the Department maintained that the proposed rules will be the only regulatory requirements that apply to the affected parties.<sup>59</sup>

48. The Administrative Law Judge finds that the Department has adequately complied with the eight-factor analysis required by Minn. Stat. § 14.131.

### **Performance-Based Regulation**

49. The Administrative Procedure Act also requires that an agency describe in its SONAR how it has considered and implemented the legislative policy supporting performance-based regulatory systems set forth in Minn. Stat. § 14.002.<sup>60</sup> A performance-based rule is one that emphasizes superior achievement in meeting the agency's regulatory objectives and maximum flexibility for the regulated party and the agency in meeting those goals.<sup>61</sup>

50. In its SONAR, the Department indicated that it asked its advisory committee on the proposed rules as well as interested stakeholders and affected parties to provide input on performance-based standards. Although suggestions for prescriptive rules were presented, the Department ultimately rejected all but a very few of these suggestions and instead opted to apply the standard of performance-based rules.<sup>62</sup>

51. The Department discussed in detail throughout the SONAR numerous ways in which the proposed rules reflect flexibility for the regulated parties rather than prescribing a specific approach that must be followed. The Administrative Law Judge

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<sup>58</sup> *Id.* at 14.

<sup>59</sup> *Id.*

<sup>60</sup> Minn. Stat. § 14.131.

<sup>61</sup> Minn. Stat. § 14.002.

<sup>62</sup> SONAR at 14.



finds that the Department has met the requirements set forth in § 14.131 for consideration and implementation of the legislative policy supporting performance-based regulatory systems.

### **Consultation with the Commissioner of Management and Budget**

52. Under Minn. Stat. § 14.131, the Agency is also required to “consult with the commissioner of management and budget to help evaluate the fiscal impact and fiscal benefits of the proposed rule on units of local government.” As noted in the discussions of the third and fifth regulatory factors in Findings **43 and 45** above, the Department indicated in its SONAR that cities own and operate most ice arenas in Minnesota and acknowledged that increased costs will likely be associated with the more frequent air testing, lower air quality limits, and training required by the proposed rules, but characterized the potential costs as “modest” in nature.<sup>63</sup>

53. By letter dated August 14, 2012, the Department requested that Minnesota Management and Budget conduct a review of the proposed rule amendments under Minn. Stat. § 14.131.<sup>64</sup>

54. In a memorandum dated September 6, 2012, Emily Engel, Executive Budget Officer for Minnesota Management & Budget, noted that she had reviewed the Department’s proposed rule amendments and SONAR and evaluated the fiscal impact and benefits of the proposed rules with respect to local governments. Ms. Engel concluded that the proposed rule amendments “will add obligations for local units of government that own or operate enclosed sports arenas. The majority of this impact, however, will be one-time but not immaterial (up to \$25,000).” Ms. Engel further determined that “cities will incur ongoing equipment maintenance and training costs but these will be significantly less.”<sup>65</sup>

55. The Administrative Law Judge finds that the Department has met the requirements set forth in Minn. Stat. § 14.131.

### **Compliance Costs for Small Businesses and Cities**

56. Under Minn. Stat. § 14.127, the Department must “determine if the cost of complying with a proposed rule in the first year after the rule takes effect will exceed \$25,000 for: (1) any one business that has less than 50 full-time employees; or (2) any one statutory or home rule charter city that has less than ten full-time employees.” The Department must make this determination before the close of the hearing record, and the Administrative Law Judge must review the determination and approve or disapprove it.

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<sup>63</sup> *Id.* at 10-13.

<sup>64</sup> Ex. K.

<sup>65</sup> *Id.*

57. As noted above in Finding 44, the Department determined in the regulatory analysis set forth in the SONAR that the cost incurred by small businesses and small cities in the first year after the rules take effect will not exceed \$25,000.<sup>66</sup>

58. As discussed in Finding 54, Emily Engel, Executive Budget Officer for Minnesota Management & Budget, concluded that the proposed rules will add additional obligations for local units of government that own or operate enclosed sports arenas. She stated that the majority of the financial impact "will be one-time but not immaterial (up to \$25,000)." (Emphasis added). Ms. Engel further determined that "cities will incur ongoing equipment maintenance and training costs but these will be significantly less."<sup>67</sup> Thus, Ms. Engel apparently concurred with the Department's conclusion that the cost incurred during the first year after the rules take effect would not exceed \$25,000.

59. The Administrative Law Judge finds that the Department has made the determination required by Minn. Stat. § 14.127 and approves that determination.

### **Adoption or Amendment of Local Ordinances**

60. Under Minn. Stat. § 14.128, the agency must determine if a local government will be required to adopt or amend an ordinance or other regulation to comply with a proposed agency rule. The agency must make this determination before the close of the hearing record, and the Administrative Law Judge must review the determination and approve or disapprove it.<sup>68</sup>

61. The Department determined that no local government will be required to adopt or amend an ordinance or other regulation to comply with the proposed rules. The Department emphasized that the Commissioner of Health has the sole authority to enforce the rules for enclosed sports arenas under Minn. Stat. § 144.1222, subd. 3, and the Commissioner has not delegated this responsibility to any local public health agency or other local units of government.<sup>69</sup>

62. The Administrative Law Judge finds that the Department has made the determination required by Minn. Stat. § 14.128 and approves that determination.

### **Analysis of the Proposed Rules**

63. This Report is limited to discussion of the portions of the proposed rules that received critical comment or otherwise need to be examined; it will not include a detailed discussion of each rule part.

64. The Administrative Law Judge finds that the Department has demonstrated, by an affirmative presentation of facts, the need for and reasonableness of all rule provisions not specifically discussed in this Report. The Administrative Law

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<sup>66</sup> SONAR at 12-13, 17.

<sup>67</sup> Ex. K.

<sup>68</sup> Minn. Stat. § 14.128, subd. 1.

<sup>69</sup> SONAR at 17.

Judge also finds that all provisions not specifically discussed are authorized by statute and there are no other problems that would prevent the adoption of the rules.

## **I. Provisions Relating to Indoor Ice Arenas (Parts 4620.3900 - 4620.4900)**

### **Overview of Comments Made in Support of and in Opposition to the Proposed Ice Arena Rules**

65. Several individuals and organizations, including Shayne Ratcliff of the Minnesota Ice Arena Managers Association, Paul Ostoff, who owns a Mankato ice rink, and the City of Inver Grove Heights, who operates two indoor sheets of ice, commented that they are in favor of the proposed rules. Mr. Ratcliff indicated that the Minnesota Ice Arena Managers Association was actively involved in the formulation of the proposed rules and its members feel that the rules are reasonable, attainable, and will adequately protect public health. He further commented that threshold levels lower than those proposed by the Department for carbon monoxide and nitrogen dioxide would not be able to be accurately monitored.<sup>70</sup>

66. Joseph Lynch, Inver Grove Heights City Administrator, noted that the City of Inver Grove Heights operates two indoor sheets of ice that are served by a single battery powered ice resurfer and a single battery-powered ice edger. He indicated that the City made an investment in battery-powered equipment in an effort to provide the public with safe indoor air and to avoid costly monitoring equipment. He noted that the City supports the current proposed rule but would oppose revisions that would make the rule more stringent or require regular or continuous monitoring of air quality.<sup>71</sup>

67. Mr. Ostoff supported the proposed rules but noted during his testimony at the hearing that the Legislature has not provided any funding to help meet the requirements set forth in the rules. He expressed concern that costs associated with the testing requirements will require arenas to close. Mr. Ostoff also indicated that his rink in Mankato had expended a significant amount of money to purchase electric ice maintenance equipment and asked for clarification whether his rink would have to conduct air quality tests.<sup>72</sup> During the hearing, John D. Olson, the Department's Indoor Air Program Enforcement Coordinator, responded that no routine testing would be required in an all-electric arena, and air quality testing would only need to be conducted if the arena brought in fuel-burning equipment as a backup to its electric-powered equipment.

68. Linda Davis, who was a figure skating coach for over 15 years, and several other individuals, including Jack Rossbach, an industrial hygienist, and Joe Blum, who helps manage ice tournaments, testified during the public hearing in opposition to many of the provisions contained in the proposed rules because they believe that they are not sufficiently protective of public health. They urged that the

<sup>70</sup> Testimony (Test.) of Shayne Ratcliff at Public Hearing (Nov. 13, 2012).

<sup>71</sup> Comments of Joseph Lynch (Nov. 27, 2012).

<sup>72</sup> Test. of Paul Ostoff at Public Hearing (Nov. 13, 2012).

rules be revised to require lower levels of carbon monoxide and nitrogen dioxide, more frequent air quality testing, and continuous monitoring of the air in indoor arenas.

69. Ms. Davis, who was a member of the advisory committee on the proposed rules, asserted that the advisory committee was dominated by persons who represented arena owners/operators who would be regulated by the proposed rules.<sup>73</sup> She maintained that the proposed thresholds for carbon monoxide and nitrogen dioxide will not protect public health and are contrary to the recommendations of several highly respected organizations. She noted that, on November 7, 2012, there had been an emergency situation in a Duluth ice arena involving “dangerously high” carbon monoxide levels that reached as high as 285 ppm. Fire crews evacuated thirty people from inside the arena. Eight of those people complained of headaches and nausea and were found to have elevated levels of carbon monoxide in their blood. Hockey teams that had played at the arena earlier that day were encouraged to go to the hospital if they had experienced any symptoms, and two individuals did, in fact, go to the hospital. At the time of the hearing, the cause of the high carbon monoxide level was still being investigated, but fire officials stated that possible causes included the arena’s propane-powered Zamboni and the aging heating and water heating systems.<sup>74</sup> Ms. Davis also pointed out that, in 2009, several individuals playing in a hockey tournament in a rink in Morris, Minnesota, became ill after exposure to carbon monoxide ranging from 60 to 115 parts per million (ppm). According to a police report pertaining to this incident, several hockey players were treated and released from the hospital for symptoms of carbon monoxide poisoning.<sup>75</sup> Ms. Davis stressed that the Department’s current rules (which require air quality testing once a week) were not enough to prevent these incidents from occurring, and asserted that the proposed rules also would not be sufficient because they do not require multiple tests a day or continuous monitoring. She stated that hockey players and figure skaters would be willing to engage in fundraising to assist rinks in purchasing proper monitoring equipment and believes that rinks would not have to close if the rules were more protective.<sup>76</sup>

70. Mr. Rossbach indicated that the accuracy of continuous monitoring equipment can be ensured by calibrating it two or three times per year. He also urged that arenas be required to have the ability to increase ventilation if carbon monoxide levels rose above 12.5 ppm in order to facilitate a rapid reduction in that level.<sup>77</sup> Mr. Blum testified that the use of continuous monitoring will ensure that monitoring is not overlooked, and emphasized that training is important, particularly because so many part-time employees work in arenas. While he acknowledged that electronic continuous

<sup>73</sup> Test. of Linda Davis at Public Hearing (Nov. 13, 2012); Comments of Linda Davis (Dec. 3, 2012) at 7, and Dec. 10, 2012) at 1. See also Public Ex. 1, Attachment B (List of Members of the Enclosed Sports Arena Rule Advisory Committee).

<sup>74</sup> Public Ex. 1, Attachment B (on-line reports posted on Nov. 7 and Nov. 8, 2012, from [www.duluthnewstribune.com/event/article/id/249217/publisher\\_ID/36/](http://www.duluthnewstribune.com/event/article/id/249217/publisher_ID/36/), [www.duluthnewstribune.com/event/article/id/249230/publisher\\_ID/36/](http://www.duluthnewstribune.com/event/article/id/249230/publisher_ID/36/), and [www.northlandnewscenter.com/internal?st=print&id=177841231&path=/enews/breaking](http://www.northlandnewscenter.com/internal?st=print&id=177841231&path=/enews/breaking)).

<sup>75</sup> Test of L. Davis at Public Hearing (Nov. 13, 2012); Public Ex. 1, Attachment B (Morris Police Department Miscellaneous Report (March 6, 2009); Comments of Linda Davis (Dec. 3, 2012).

<sup>76</sup> Test. of L. Davis at Public Hearing (Nov. 13, 2012); Public Ex. 1.

<sup>77</sup> Test. of Jack Rossbach at Public Hearing (Nov. 13, 2012); Public Ex. 2.

monitoring systems cost approximately \$5,000, he believes they are necessary to ensure the safety of people using ice rinks. He also stated that the use of continuous monitoring would likely decrease the cost of the arena's liability insurance.<sup>78</sup>

71. Martha Low commented that, in light of the health risks posed by carbon monoxide and nitrogen dioxide, the monitoring of air quality in ice arenas needs to be held to higher standards. She noted that long-term effects of these gases include a long list of diseases, many of which involve impaired lung function, and indicated that at least one doctor has found that the rate of asthma is 4-5 times higher in skating populations than in non-skating populations. Dr. Low also noted that these gases settle in an area close to the ice, where children skate. She emphasized that children who are skating or playing hockey are engaged in vigorous exercise, which increases their demand for air, and children are more susceptible than adults to carbon monoxide and nitrogen dioxide because of their smaller size and stature. She argued that the Department relied on research that used adult subjects whose bodies are at rest when setting the action levels and contended that the use of this research cannot ensure the safety of children.<sup>79</sup>

72. Keith Rapp commented that he grew up playing hockey and has seen firsthand several instances of adverse reactions to poor indoor air quality on the part of players and fans.<sup>80</sup> Christine Dahn filed comments in which she stated that her child had to quit figure skating because she did not feel well after skating in indoor arenas,<sup>81</sup> and Dawn Lundquist reported that her child had suffered from dizziness, light-headedness, headaches, and nausea after spending longer periods of time at an indoor rink.<sup>82</sup>

73. Numerous other individuals filed written post-hearing comments objecting to the proposed rules on grounds similar to those noted above. These individuals included John Benson,<sup>83</sup> Celia Baker,<sup>84</sup> Terry Frazerhurst,<sup>85</sup> Laura Erickson,<sup>86</sup> Jeanette Meidal,<sup>87</sup> Jim Forsberg,<sup>88</sup> Amy Hoyord,<sup>89</sup> Milissa Burdette,<sup>90</sup> Elizabeth Butterfield,<sup>91</sup> Joshua Strayer,<sup>92</sup> Sarah Strayer,<sup>93</sup> John Davis,<sup>94</sup> Rebecca Foss,<sup>95</sup> Bob and Ann

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<sup>78</sup> Test. of Joe Blum at Public Hearing (Nov. 13, 2012).

<sup>79</sup> Comments of Martha Low (Dec. 2, 2012).

<sup>80</sup> Comments of Keith Rapp (Nov. 26, 2012).

<sup>81</sup> Comments of Christine Dahn (Dec. 3, 2012).

<sup>82</sup> Comments of Dawn Lundquist (Dec. 3, 2012).

<sup>83</sup> Comments of John Benson (Nov. 27, 2012).

<sup>84</sup> Comments of Celia Baker (Nov. 30, 2012).

<sup>85</sup> Comments of Terry Frazerhurst (Nov. 30, 2012).

<sup>86</sup> Comments of Laura Erickson (Nov. 30, 2012).

<sup>87</sup> Comments of Jeanette Meidal (Dec. 1, 2012).

<sup>88</sup> Comments of Jim Forsberg (Dec. 2, 2012).

<sup>89</sup> Comments of Amy Hoyord (Dec. 1, 2012).

<sup>90</sup> Comments of Milissa Burdette (Nov. 26, 2012).

<sup>91</sup> Comments of Elizabeth Butterfield (Dec. 2, 2012).

<sup>92</sup> Comments of Joshua Strayer (Dec. 2, 2012).

<sup>93</sup> Comments of Sarah Strayer (Dec. 2, 2012).

<sup>94</sup> Comments of John Davis (Dec. 2, 2012).

<sup>95</sup> Comments of Rebecca Foss (Dec. 3, 2012).

Davis,<sup>96</sup> Bill and Mary Becker,<sup>97</sup> Jon Hoffmeister,<sup>98</sup> Kevin Low,<sup>99</sup> Carol Garborg,<sup>100</sup> and Susan Davis.<sup>101</sup> Most of them echoed the concerns summarized above and requested that the proposed rules establish lower air quality levels, require testing of gas-powered machines after each use, mandate continuous monitoring of carbon monoxide and nitrogen dioxide levels in areas, and require better evacuation plans to ensure that evacuation occurs before contaminant levels become too high for children or the elderly.

74. Where relevant, specific concerns noted by those commenting in support of and in opposition to the proposed rules are set forth in further detail below.

### **Part-by-Part Analysis of Proposed Ice Arena Rules**

75. As noted above, only the provisions of the proposed rules that received comments or otherwise require discussion are addressed below. The Department has demonstrated that the remaining rules are needed and reasonable, and within its statutory authority.

#### **Part 4620.3950 – Acceptable Air Quality**

76. The Department's current rules and its proposed rules both establish "acceptable air quality conditions" for carbon monoxide and nitrogen dioxide in indoor ice arenas and require that "immediate corrective action" be taken to reduce exposure if those levels are exceeded.

77. The rules that are currently in place merely require regulated parties to document that acceptable air quality conditions "can be" maintained, and define acceptable air quality conditions as "one-hour average air concentrations of not more than 30 parts of carbon monoxide per million parts of air by volume (30 ppm), and one-hour average air concentrations of not more than 0.5 ppm of nitrogen dioxide."<sup>102</sup>

78. The proposed rules would clarify that the owner or operator of an indoor ice arena "must maintain" acceptable air quality conditions "at all times in areas of the arena building that are open to the public." The proposed rules would also reduce the concentrations of concern for both carbon monoxide and nitrogen dioxide. For carbon monoxide, the action level would be reduced to one-hour average air concentrations of not more than 20 ppm and, for nitrogen dioxide, the action level would be reduced to one-hour average concentrations of not more than 0.3 ppm. In the SONAR, the Department indicated that it had revised the acceptable levels of carbon monoxide and

<sup>96</sup> Comments of Bob and Ann Davis (Dec. 3, 2012).

<sup>97</sup> Comments of Bill and Mary Becker (Dec. 3, 2012).

<sup>98</sup> Comments of Jon Hoffmeister (Dec. 3, 2012).

<sup>99</sup> Comments of Kevin Low (Dec. 3, 2012).

<sup>100</sup> Comments of Carol Garborg (Dec. 3, 2012).

<sup>101</sup> Comments of Susan Davis (Dec. 4, 2012).

<sup>102</sup> Minn. R. 4620.4300.

nitrogen dioxide "to reflect current knowledge about the health effects from exposure to these air pollutants."<sup>103</sup>

79. According to the Department, the action level for carbon monoxide is intended to protect arena users by preventing any increase in blood carboxyhemoglobin levels (COHb) from exceeding ~2.0%. It contends that the proposed action level of 20 ppm will protect the most sensitive group identified in the scientific literature -- people with documented or latent coronary heart disease -- and provide additional protection to the fetuses of pregnant women from hypoxic effects caused by exposure to carbon monoxide. The Department also asserted that the proposed carbon monoxide action level will "better protect individuals who might be exposed for longer-term periods, or who greatly exert themselves physically."<sup>104</sup>

80. In Appendix A attached to the SONAR, the Department included a chart noting various air quality regulations, guidelines, and recommendations adopted or suggested by various researchers or governmental and non-governmental agencies relating to carbon monoxide and nitrogen dioxide exposure for the general public using ice arenas (not workers). With respect to carbon monoxide, the only one-hour levels in the chart that are lower than the 20 ppm set forth in the Department's proposed rules are 12.5 ppm (set forth in guidelines adopted by the Province of Manitoba) and 11 ppm (recommended by a British Columbia Ad Hoc Working Group consisting of researchers, government, and recreational facilities associations). The Department noted in the chart contained in Appendix A that the State of Pennsylvania had adopted a one-hour level of 20 ppm in 2003 guidelines, and that researchers Lee et al. (1994), Levesque et al. (1990), and Pelham et al. (2002), had also recommended one-hour levels of 20 ppm. Appendix A indicates that the States of Massachusetts and Rhode Island, the City of Winnipeg, the Ontario Recreational Facilities Association, the Province of Saskatchewan, and researchers Brauer & Spengler (1994) and Luckhurst & French (1979) had adopted or recommended levels higher than those in the proposed rules (ranging from 25 ppm to 35 ppm).<sup>105</sup>

81. In Appendix E attached to the SONAR, the Department discussed background levels of carbon monoxide; various guidelines and regulatory levels that have been established or recommended by other organizations; information about the toxicity and health effects of carbon monoxide exposure; and the Department's conclusion that an action level of 20 ppm for carbon monoxide is appropriate.<sup>106</sup> The Department indicated in Appendix E that the national ambient air quality standard set by the U.S. Environmental Protection Agency (EPA) for carbon monoxide is 35 ppm for one-hour or short-term exposure, and 9 ppm for eight-hour exposure, and the EPA's 2010 review of these standards in 2010 noted that exposure to carbon dioxide at these levels has the "potential to increase COHb to levels associated with adverse cardiovascular health effects in some individuals."<sup>107</sup> The Department noted that a

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<sup>103</sup> SONAR at 21.

<sup>104</sup> *Id.*

<sup>105</sup> SONAR, Appendix A.

<sup>106</sup> SONAR, Appendix E.

<sup>107</sup> *Id.* at 50.

substantial portion of Minnesota's population is affected by cardiovascular disease. For example, the Department indicated that 3.6% of Minnesota adults reported angina (chest pain or discomfort due to inadequate blood supply to the heart) in 2010.<sup>108</sup> The Department further noted that the California Air Resources Board had adopted a one-hour reference exposure level of 20 ppm for carbon monoxide and had not revised this level after review of additional research on carbon monoxide and special sensitivities of children.<sup>109</sup>

82. In Appendix E, the Department also discussed the air quality guidelines issued by the World Health Organization (WHO) in 2010. The Department noted that the WHO found that "exposure to carbon monoxide reduces maximum exercise ability in healthy young individuals and reduces the time to angina and, in some cases, the time to ST-segment depression in people with cardiovascular disease, albeit at a concentration that is lower than that needed to reduce exercise ability in healthy individuals." The WHO guidelines indicated that exposure to 26 ppm carbon monoxide for one hour, or exposure to 9 ppm for eight hours, will result in COHb levels at or below 2.0%. The Department noted that the "equivalents provided by WHO demonstrate the interplay between 'concentration' and 'time' that need to be considered when looking at adverse health effects from CO [carbon monoxide] exposure."<sup>110</sup>

83. In addition, the discussion contained in Appendix E to the SONAR referenced the Acute Exposure Guideline Levels for carbon monoxide that have been issued by the Federal Advisory Committee, a national advisory committee on emergency planning efforts. The Committee's one-hour acute exposure guideline level for carbon monoxide is 83 ppm; the 4-hour level is 33 ppm; and the 8-hour level is 27 ppm. These levels are defined as "the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects, or an impaired ability to escape."<sup>111</sup> Finally, the Department summarized several work-related standards in Appendix E. According to the Department, the federal Occupational Safety and Health Administration (OSHA) has indicated that the eight-hour permissible exposure limit for carbon monoxide is 50 ppm. In contrast, Minnesota OSHA has indicated that the eight-hour permissible exposure limit is 35 ppm. The National Institute of Occupational Safety and Health and MN OSHA have set a ceiling limit for carbon monoxide (which is not to be exceeded) of 200 ppm.<sup>112</sup>

84. Based upon its review of relevant research, the Department determined that an action level of 20 ppm for carbon monoxide would protect arena users by ensuring that COHb levels do not exceed an increase of approximately 2%. The Department found that "[m]ultiple studies with different experimental designs have yielded surprisingly similar results, providing great credibility for the use of a sensitive endpoint ranging from a 2 – 4% increase in COHb" and concluded that "[t]he evidence

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<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> *Id.* at 51.

<sup>111</sup> *Id.* at 51-52.

<sup>112</sup> *Id.* at 52.



suggests this to be an appropriate target for CO designed to reduce CO exposure in this environment [i.e., an indoor ice skating facility], with its unique combination of exposure duration, intensity (due to the exertion of active participants), and the potential for participants to be unaware they are being exposed to CO."<sup>113</sup>

85. With respect to nitrogen dioxide, the Department asserted in the SONAR that its proposal to reduce the action level to 0.3 ppm reflects not only current scientific knowledge about the health effects from exposure but also improvements in the ability to measure nitrogen dioxide in the air. The Department noted that studies have shown that some asthmatics might experience enhanced response to allergens at exposures to nitrogen dioxide beginning at 0.26 ppm for 15-30 minutes, and increased airway reactivity has been found in asthmatics exposed to 0.25-0.3 ppm for 30-60 minutes. The SONAR further indicates that, when electronic devices are properly maintained, readings for nitrogen dioxide are reliable and will fall within the accuracy and precision specifications at levels of greater than or equal to ~0.3 ppm.<sup>114</sup>

86. The only one-hour nitrogen dioxide levels included in the chart in SONAR Appendix A that are lower than the 0.3 ppm set forth in the Department's proposed rules are 0.25 ppm (which was recommended in guidelines issued by the Province of Manitoba and the State of Pennsylvania and in research studies by Brauer & Spengler (1994) and Lee et al. (1994)); and 0.20 ppm (which was recommended in a research study by Pelham et al. (2002)). While the chart did not identify any entity or researcher that had recommended the 0.3 ppm set forth in the Department's proposed rules, it did identify higher levels ranging from 0.5 to 3 ppm that were adopted or recommended by the State of Massachusetts, the Ontario Recreational Facilities Association, the Recreational Facilities Association of Nova Scotia, and the Province of Saskatchewan.<sup>115</sup>

87. In Appendix F attached to the SONAR, the Department provided a more detailed explanation for its determination of the appropriate action level for nitrogen dioxide. Appendix F includes a consideration of background levels of nitrogen dioxide; a discussion of the guidelines and rules issued by the EPA, the California Resources Board, the Department's Risk Assessment Unit, the WHO, the Federal Advisory Committee, NIOSH, and federal and state OSHA requirements; an explanation of the health effects associated with exposure to nitrogen dioxide; monitoring considerations; and conclusions and recommendations.<sup>116</sup>

88. The Department noted in Appendix F that, in 2010, the EPA published a primary National Ambient Air Quality Standard for nitrogen dioxide of 0.1 ppm for one hour. The Department further indicated that the California Air Resources Board reduced California's one-hour standard for nitrogen dioxide from 0.25 ppm to 0.18 ppm in 2007 in order to protect asthmatics, infants, and children. According to the Department, the WHO has recommended a one-hour mean air quality guideline value

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<sup>113</sup> *Id.* at 57.

<sup>114</sup> SONAR at 21.

<sup>115</sup> *Id.*

<sup>116</sup> SONAR, Appendix F.

for indoor air of 0.2 mg/m<sup>3</sup> (0.106 ppm) and has stated that the lowest observable acute effect of nitrogen dioxide was near 0.2-0.3 ppm based on clinical studies showing increased airway responsiveness in asthmatics. The Department pointed out that the Acute Emergency Guideline Level (AEGL) for nitrogen dioxide issued by the Federal Advisory Committee is 0.5 ppm for all of the following exposure durations: ten minutes, thirty minutes, one hour, four hours, and eight hours. The AEGL-1 is defined as "the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, non-sensory effects." The Committee acknowledged that some asthmatics who are exposed to 0.3-0.5 ppm of nitrogen dioxide may respond with subjective symptoms or slight changes in pulmonary function. The Department also discussed the short-term exposure limit for nitrogen dioxide established by MN OSHA and NIOSH (1 ppm – 15 minutes) and the federal OSHA ceiling limit of 5 ppm.<sup>117</sup>

89. In Appendix F, the Department also discussed research relating to the health effects of exposure to nitrogen dioxide. It noted that, although individuals vary substantially in their response to nitrogen dioxide, asthmatics are a very large population who need protection in indoor arena environments. In addition, children may be at greater risk than adults because they breathe more air and may still have developing lungs, and children with asthma have a higher degree of airway responsiveness than adult asthmatics. In addition, the Department pointed out that child skaters are closer to the ice and are usually exercising heavily; thus, they may be exposed to higher concentrations of nitrogen dioxide compared to adults and spectators.<sup>118</sup>

90. The Department proposed an action level for nitrogen dioxide of 0.3 ppm because the studies summarized in Appendix F show that sensitive people may experience adverse health effects from exposures at or near this action level. In the Department's view, lowering the nitrogen dioxide action level from 0.5 ppm to 0.3 ppm should provide more protection for children, asthmatics, and the elderly, all of whom may be potentially susceptible. The Department further explained:

This new action level better reflects the current state of knowledge about the adverse health effects due to exposure to nitrogen dioxide, particularly issues related to airway responsiveness in asthmatics exposed to NO<sub>2</sub> in combination with other irritants and allergens. The new action level is also based upon the ability to perform adequate air monitoring for NO<sub>2</sub> . . . . Current real-time air monitoring instruments cannot reliably or accurately measure NO<sub>2</sub> at concentrations below 0.3 ppm. It is therefore important to realize that health effects may occur at levels below this value; however, these effects are expected to be mild and reversible.<sup>119</sup>

91. In reaching its assessment of the capabilities of available monitoring equipment, the Department researched the instrumentation and solicited information

<sup>117</sup> SONAR, Appendix F at 61-64.

<sup>118</sup> *Id.* at 64-66.

<sup>119</sup> *Id.* at 65-66.

from all known manufacturers of such instruments. The Department noted that the standard testing range for colorimetric tubes can be extended to 0.25 ppm with the most commonly-used instrument, but it is difficult to visually "read" the extent of color development at these very low levels. The Department expects electronic sensor instruments that display a digital readout will become the predominant method used in the ice arenas due to the increased testing frequency specified in the proposed rules, the difficulty of reading tubes at low levels, and the declining cost of electronic instruments. Although manufacturers' representatives state that the measuring ranges of the electronic devices extend to 0.1 ppm for nitrogen dioxide, they also admit that readings at low levels can be highly inaccurate. In some instances, the instrument may display a negative reading when concentrations are in these low ranges. The Department has noticed this problem with devices it owns, and has found that maintenance and calibration of the instruments does not necessarily result in highly accurate readings. Despite all of these concerns, the manufacturer representatives told the Department that, once readings hit 0.3 ppm for nitrogen dioxide or 3 ppm for carbon monoxide, the readings are reliable and will fall within the accuracy and precision specifications if the device is maintained properly. The Department also noted that the equipment used to test lower levels is far more costly, not portable, and difficult to use. In light of these practical considerations, the Department proposed to set the action level for nitrogen dioxide at 0.3 ppm.<sup>120</sup>

92. Gregory Mack, Director of the Ramsey County Parks and Recreation Department, supported the acceptable air quality levels set forth in part 4620.3950 and stated that indoor ice arenas will be able to maintain these air quality conditions by proper maintenance and operation of ice maintenance equipment and building ventilation systems.<sup>121</sup>

93. Linda Davis,<sup>122</sup> John Benson,<sup>123</sup> Martha Low,<sup>124</sup> and numerous other members of the public objected to the action levels set in the proposed rules and urged that the Department instead adopt lower threshold levels of not more than 9 or 10 ppm of carbon monoxide and not more than 0.1 ppm of nitrogen dioxide. They argued that the proposed rules do not reflect the most recent and protective research and recommendations, and thus do not adequately protect the public health. They also asserted that the proposed rules are improperly based on research that uses measurements for only one hour of exposure, while the body is at rest and not engaged in vigorous exercise, such as skating. They indicated that it is rare for a hockey player, figure skater, or coach to stay in an ice rink for just one hour. Terry Frazerhurst,<sup>125</sup> Jeanette Meidal,<sup>126</sup> Amy Hoyord,<sup>127</sup> Jim Forsberg,<sup>128</sup> Elizabeth Butterfield,<sup>129</sup> Sarah

<sup>120</sup> *Id.* at 66-67; see also SONAR Appendix G (describing air monitoring instruments).

<sup>121</sup> Comments of Gregory Mack (Nov. 26, 2012).

<sup>122</sup> Test. of L. Davis at Public Hearing (Nov. 13, 2012); Public Ex. 1; Comments of L. Davis (Dec. 3, 2012 and Dec. 10, 2012).

<sup>123</sup> Comments of J. Benson (Nov. 27, 2012).

<sup>124</sup> Comments of M. Low (Dec. 2, 2012).

<sup>125</sup> Comments of T. Frazerhurst (Nov. 30, 2012).

<sup>126</sup> Comments of J. Meidal (Dec. 1, 2012).

<sup>127</sup> Comments of A. Hoyord (Dec. 1, 2012).

<sup>128</sup> Comments of J. Forsberg (Dec. 2, 2012).

Strayer,<sup>130</sup> John Davis,<sup>131</sup> Rebecca Foss,<sup>132</sup> Dawn Lundquist,<sup>133</sup> Bill and Mary Becker,<sup>134</sup> Jon Hoffmeister,<sup>135</sup> Kevin Low,<sup>136</sup> Susan Davis,<sup>137</sup> Chad Baker,<sup>138</sup> Milissa Burdette,<sup>139</sup> Celia Baker,<sup>140</sup> and Peggy Johnson<sup>141</sup> maintained that skaters and their families often remain in ice arenas for several hours at a time, and many of them estimated that they remained in arenas eight hours or more, particularly during tournaments. Mr. Davis stated that some children skate five to seven days a week. Ms. Davis asserted that figure skating coaches spend up to eight hours a day at the rink, multiple days of the week. She also cited research that indicates that the respiratory rate at the time of skating can be ten times higher than at rest and that, upon exposure to similar concentrations of carbon monoxide, the rate of COHb in the blood will increase much more rapidly in the hockey player than in the arena employee. This is particularly true with respect to children, who have a higher metabolic rate than adults.

94. For these reasons, Ms. Davis, Mr. Benson, Ms. Low and other members of the public contended that research based on an eight-hour exposure should be used, rather than the one-hour exposure rate assumed by the Department. They urged that the Department adopt the eight-hour exposure levels recognized by the EPA and the WHO of 9 ppm for carbon monoxide and 0.1 ppm for nitrogen dioxide. Ms. Davis pointed out that other experts in the field (Dr. David Penney, a retired professor of physiology at Wayne State University and participant in the 2009 WHO working group meeting, and Dr. Leon Prockop, a neurology professor at the University of South Florida) recommend 8.6-9 ppm and 10 ppm, respectively,<sup>142</sup> and Dr. Prockop has opined that any level of carbon monoxide above 10 ppm in the ambient air of enclosed ice arenas puts athletes at risk for neurological and/or cardiac damage.<sup>143</sup> Ms. Davis also emphasized that the Department acknowledged in its SONAR that health effects may occur at nitrogen dioxide exposure levels below 0.3 ppm. Finally, Ms. Davis further alleged that the reference to a "one hour average" in the proposed rules was confusing and would be impossible to determine without taking more than one air sample.<sup>144</sup>

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<sup>129</sup> Comments of E. Butterfield (Dec. 2, 2012).

<sup>130</sup> Comments of S. Strayer (Dec. 2, 2012).

<sup>131</sup> Comments of J. Davis (Dec. 2, 2012).

<sup>132</sup> Comments of R. Foss (Dec. 3, 2012).

<sup>133</sup> Comments of D. Lundquist (Dec. 3, 2012).

<sup>134</sup> Comments of M. and B. Becker (Dec. 3, 2012).

<sup>135</sup> Comments of J. Hoffmeister (Dec. 3, 2012).

<sup>136</sup> Comments of K. Low (Dec. 3, 2012).

<sup>137</sup> Comments of S. Davis (Dec. 4, 2012).

<sup>138</sup> Comments of Chad Baker (Nov. 29, 2012).

<sup>139</sup> Comments of M. Burdette (Nov. 26, 2012).

<sup>140</sup> Comments of C. Baker (Nov. 30, 2012).

<sup>141</sup> Comments of Peggy Johnson (Nov. 28, 2012).

<sup>142</sup> Test. of L. Davis; Public Ex. 1, Attachment B (article by Van Berkel, Jessica, "Silent danger at the rinks," posted at [www.startribune.com/investigators/89567652.html?refer=y](http://www.startribune.com/investigators/89567652.html?refer=y)); Public Ex. 1, Attachment C (email message from Linda Davis to William Toscano et al. relaying Dr. Penney's professional opinion (Oct. 18, 2012); Dr. Penney's recommendation to MDH (Sept. 16, 2010); Dr. Penney's testimony from the Senate hearing (March 17, 2010); and Dr. Prockop's letter to Ms. Davis (Nov. 10, 2012)).

<sup>143</sup> Public Ex. 1, Attachment C (Dr. Prockop's letter to Ms. Davis (Nov. 10, 2012)).

<sup>144</sup> Public Ex. 1; Comments of L. Davis (Dec. 3, 2012); Comments of L. Davis (Dec. 10, 2012).

95. Keith Rapp urged that indoor air quality standards for carbon monoxide and nitrogen dioxide be based on peer-reviewed studies conducted by toxicology experts regarding the safe level for both short-term exposure limits (less than 90-minutes, as might be experienced by individuals attending a game or practice) and long-term exposure limits (8-hour limits, as might be experienced by ice rink employees).<sup>145</sup>

96. In response to these comments, the Department asserted that the minimum standards in the proposed rules are adequate to protect public health based on available scientific studies, and declined to make any changes in the levels. The Department indicated that it performed "painstaking research" to arrive at the proposed acceptable air quality standards, including reviewing the studies cited in the SONAR and the EPA guidelines upon which some of those objecting to the proposed rules relied. The Department also emphasized that it convened an air quality standards subcommittee consisting of medical experts during the process of formulating the proposed rules.<sup>146</sup> The Department asserted that it had reviewed the specific sources cited by those commenting on the proposed rules and rejected those sources as non-authoritative for regulatory purposes. Instead, the Department argues that it properly relied on the more evidence-based, scientific studies cited in the SONAR and the peer-reviewed research conducted by its research scientists. The Department maintained that the EPA materials do not reflect a gold standard or even a federal standard and that the EPA guidelines "are not based upon an EPA health-based study and therefore cannot withstand scrutiny for regulatory use." In addition, the Department noted that the EPA has not produced model regulations for agencies to adopt, and has simply posted material produced by the International Ice Hockey Federation. While the Department does not object to these guidelines being used by operators as best practices aspirational goals, it declined to modify the proposed rules in the manner suggested and asserted that the proposed rules were designed to protect the public's health.<sup>147</sup>

97. The Department also disagreed that the one-hour average measurement set forth in part 4620.3950 is improper. The Department cautioned that this rule part must be viewed in conjunction with other rule parts to understand the methods of measurement and corrective action responsibilities. It explained that part 4620.3950 establishes the standard for acceptable quality, and part 4620.4510 sets forth the measurement regimen that will alert operators to problems. Under the proposed rules, the operator must take a single measurement 20 minutes after resurfacing. If the air quality is acceptable, the operator need not take further action. If the air quality is not acceptable, the operator must take action.<sup>148</sup>

98. Linda Davis and Jack Rossbach testified that reliable monitoring equipment that operators could use on an everyday basis is readily available.<sup>149</sup> In its SONAR and post hearing comments, the Department disagreed that trustworthy

<sup>145</sup> Comments of K. Rapp (Nov. 26, 2012).

<sup>146</sup> Department's Initial Post-Hearing Comments (Nov. 27, 2012) ("Department's Initial Comments") at 2.

<sup>147</sup> Department's Post-Hearing Rebuttal Comments (Dec. 10, 2012) (Department's Rebuttal Comments) at 2.

<sup>148</sup> Department's Initial Comments at 2.

<sup>149</sup> Test. of L. Davis and J. Rossbach at Public Hearing (Nov. 13, 2012).

equipment exists to measure nitrogen dioxide at the level suggested by Ms. Davis, and continues to assert that technical ability to monitor nitrogen dioxide levels below 0.3 ppm is currently lacking.<sup>150</sup> The Department reiterated that the current available technology does not perform at levels that warrant incorporating continuous air monitoring into the regulation. It emphasized that carbon monoxide detectors and alarms used in households allow exposures of over 70 ppm for up to four hours, based on 10 percent carboxyhemoglobin, while the proposed rules require corrective action at 4 percent carboxyhemoglobin.<sup>151</sup> In her post-hearing comments, Ms. Davis agreed that hand-held monitoring devices are limited in their ability to make accurate measurements at the 0.1 ppm level of nitrogen dioxide that she recommends, but asserted that fixed monitoring systems, which start at a cost of \$5,000, do have that capability.<sup>152</sup>

99. The Department further contended that those commenting in opposition to the proposed rules have not provided evidence of people routinely being made sick in ice arenas. The Department maintains that people become ill when concentrations of carbon monoxide and nitrogen dioxide are high, and not from low-level exposure to those contaminants. The Department stated that it is unaware of solid research that shows illness from chronic low-level exposures to carbon monoxide and contended that the studies it has seen are inconclusive at best. Although the Department does not deny that it is possible and indicated that it would continue to monitor the literature to stay informed of scientific studies in this area, the Department believes it is appropriate to base its regulatory activity on available scientific evidence.<sup>153</sup>

100. The Department further rejected the suggestion of many commenters that ice arena users and spectators should be protected for exposures of eight hours or more. The Department argued that, even during hockey tournaments, arena users are exposed for only an hour or two at a time, interspersed with time spent in locker rooms, arena lobbies, and outside of the building, and contended that this allows their bodies to metabolize the contaminants.<sup>154</sup>

101. It is apparent that reasonable minds are divided about what action level should be specified in the proposed rules for carbon monoxide and nitrogen dioxide and what length of time individuals generally remain in indoor arenas. It is also evident that there are various studies that can be cited in support of differing exposure levels. However, as noted above, an agency is legally entitled to make choices between possible approaches so long as its choice is rational. It is not the role of the Administrative Law Judge to determine which policy alternative presents the “best” approach, since this would invade the policy-making discretion of the agency. The

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<sup>150</sup> SONAR at 21; SONAR Appendix F at 66-68; SONAR Appendix G; Department’s Initial Comments at 2, 3.

<sup>151</sup> Department’s Rebuttal Comments at 2.

<sup>152</sup> Comments of L. Davis (Dec. 3, 2012) at 4.

<sup>153</sup> Department’s Rebuttal Comments at 3.

<sup>154</sup> *Id.*

question is, rather, whether the choice made by the agency is one that a rational person could have made.<sup>155</sup>

102. The Administrative Law Judge concludes that the Department has shown that there is a rational basis for the carbon monoxide and nitrogen dioxide action levels it has chosen. The Department has provided ample explanation of the evidence on which it is relying and how the evidence connects rationally with the approach it chose to take in the proposed rules, in accordance with applicable case law.<sup>156</sup> The choice made by the Department is one that a rational person could have made, and is not arbitrary or unreasonable. Accordingly, the Administrative Law Judge finds that the Department has adequately demonstrated the need for and reasonableness of Part 4620.3900 of the proposed rules.

### **Part 4620.4000 - Definitions**

103. Gregory Mack, Director of the Ramsey County Parks and Recreation Department, commented that the definitions of the terms "owner," "operator," and "responsible person" require further differentiation. He noted that Ramsey County is the "owner" of its ten indoor ice arenas, the County's Parks and Recreation Department is the "operator" of the arenas, and permanent and seasonal employees are the "responsible persons," and asserted that the rules should clarify the relative responsibilities of each, particularly with respect to maintaining a "certificate of approval" and meeting training requirements. In particular, Mr. Mack expressed concern about the requirement that a responsible person be available in the arena buildings at all times the arena is open to the public. He indicated that, in many instances, contractual user groups such as figure skating coaches and individual students are allowed to skate in a County indoor ice arena without County staff present. No ice maintenance is performed during such times. He suggested that the proposed rules be revised to state that the responsible persons must be available at all times that the arena is open to the public but not necessarily physically in the arena building.<sup>157</sup>

104. In its post hearing response, the Department acknowledged that Ramsey County's situation is unique and contended that the rules are written to address the entire spectrum of regulated parties. The Department also indicated that it will provide additional guidance as needed in the form of fact sheets and direct technical assistance to individual regulated parties.<sup>158</sup>

105. The Department has demonstrated that the definitions contained in the proposed rules are needed and reasonable to ensure that regulated parties understand the terms used in the rules. While the Department may continue to consider Ramsey County's comments and, if warranted, propose further modifications to this part of the proposed rules, the proposed rules have not been shown to be defective.

<sup>155</sup> *Federal Sec. Adm'r v. Quaker Oats Co.*, 318 U.S. 218, 233 (1943).

<sup>156</sup> *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d at 244.

<sup>157</sup> Comments of G. Mack (Nov. 26, 2012).

<sup>158</sup> Department's Rebuttal Comments at 3-4.

## **Part 4620.4450 - Training**

106. Ramsey County objected to the requirement in Subpart 1 of Part 4620.4450 that the owner or operator "ensure that a trained responsible person is available in the arena building at all times that the arena is open to the public."

107. In its post-hearing response, the Department indicated that Ramsey County had expressed its concern about the requirement that a trained responsible person be on site during advisory committee meetings, and the committee had ultimately recommended the rule part as set forth in the proposed rules based upon a consensus that the burden imposed by having a trained person in the arena was outweighed by the benefit to the health and safety of the public. The Department noted that it had added part 4620.4450, Subpart 1, Item A, to clarify that the responsible person's training shall be "appropriate for the trainee's level of responsibility in operating the arena." The Department expressed confidence that it could work with Ramsey County to develop a training plan that will allow it to comply with the rule without being required to staff its buildings.<sup>159</sup>

108. The Administrative Law Judge concludes that the Department has shown that the requirement that a trained responsible person be present when the arena is open to the public is needed and reasonable to facilitate compliance with the rules and protect the health and safety of members of the public.

## **Part 4620.4510 – Measurement of Air Quality Conditions**

### **Subpart 3 – Measurements for Ice Resurfacing**

### **Subpart 4 – Measurements for Ice Edging**

109. Subpart 3 of the proposed rules sets forth requirements for measuring the air quality conditions after using an internal combustion engine-powered ice resurfacer. Under the proposed rules, owners or operators must measure air concentrations at least twice per week after using ice resurfacers (rather than the once per week measurement required by part 4620.4500 of the existing rules). Similar to the existing rules, the proposed rules require that measurements must be taken at board height, inside the boards, and at the centerline of the ice; 20 minutes after completing resurfacing unless the owner or operator has received approval from the Commissioner to measure under an alternative schedule; and at times of maximum use of the resurfacing machine. The proposed rules impose a further requirement that measurements must be taken at least once on Saturday or Sunday of each week that the arena is open to the public.

110. In the SONAR, the Department indicated that the proposed requirement of twice-weekly air quality testing following resurfacer use, with at least one testing occurring during weekend operations, will ensure adequate sample data to evaluate air quality under a variety of conditions. According to the Department, the proposed rules

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<sup>159</sup> Department's Rebuttal Comments at 3.



carry out the recommendations of the advisory committee to increase the frequency of testing. The Department further contended that the more frequent air testing schedule will allay the committee's concerns that air quality problems otherwise could go undetected for several days. The requirement that at least one of the required air tests occur on the weekend will, according to the Department, ensure that testing is actually being performed under the worst-case scenario involving weekend tournaments and elevated ice use, with accompanying increased frequency of resurfacing.<sup>160</sup>

111. The Department noted in the SONAR that one of the committee members had recommended that arenas be required to continuously monitor air quality conditions, but the Department and most of the other advisory committee members opposed this recommendation. The Department pointed out that continuous monitoring systems are new technologies and the Department is continuing to evaluate their accuracy and reliability. Due to their continuous operation and their location in the boards where they are bumped and exposed to contaminants such as ice chips, Department expressed concern that continuous monitoring systems might not operate properly over time. The Department also emphasized that continuous monitoring systems cost significantly more than portable equipment and it is uncertain whether existing manufacturers and suppliers could meet the installation and service needs of the 280 indoor ice arenas in the state. The Department indicated that it will continue to track the development of continuous monitoring systems, but does not believe that it is needed or reasonable to require this testing at the present time.<sup>161</sup>

112. Subpart 4 of part 4620.4510 of the proposed rules addresses required measurements after the use of an internal combustion engine-powered ice edger. Under the proposed rules, owners or operators must measure air concentrations at least once per week after using an ice edger. Measurements must be taken following a time of maximum ice edger use at board height, inside the boards, and at the centerline of the ice. Such measurements must be taken 20 minutes after completing edging if the arena building is open to the public when edging occurs; or before the public reoccupies the arena, if the arena is not open to the public when edging occurs.

113. The Department indicated in the SONAR that, although ice edger engines are considered small engines and are not used as frequently as ice resurfacing equipment, edgers can also produce significant carbon monoxide emissions that can be observed hours after use of the equipment. The Department noted that its advisory committee provided a consensus recommendation for weekly air monitoring following internal combustion engine-powered ice edging. According to the SONAR, the Department and the majority of the advisory committee rejected a proposal that air monitoring be performed after every use of an ice edging machine because they believed this would be unnecessary and unreasonable. The Department asserted in the SONAR that weekly testing of ice edgers is sufficient to identify air quality problems stemming from the use of this equipment.<sup>162</sup>

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<sup>160</sup> SONAR at 32.

<sup>161</sup> *Id.* at 33.

<sup>162</sup> *Id.* at 33.

114. Gregory Mack of the Ramsey County Parks and Recreation Department objected to the increased testing requirements set forth in Subparts 3 and 4 of the proposed rules. He indicated that the cost of test tubes for weekly testing in the indoor ice arenas located within Ramsey County is approximately \$3,500 per year, and asserted that the proposed rule requirements would add two tests per week and increase the County's costs by at least \$7,000 per year. He maintains that the County has a long history of taking weekly air quality readings without any recorded violations of air quality standards and argued that the increased testing requirement was not warranted under these circumstances.<sup>163</sup>

115. In response to Ramsey County's concerns, the Department stressed that the twice-per-week testing following resurfacing and at least once-per-week testing following edging was the consensus recommendation of the advisory committee. The Department contends that this testing is the minimal amount necessary to make sure operators are maintaining adequate air quality and asserts that this requirement is needed and reasonable.<sup>164</sup>

116. Linda Davis objected to subparts 3 and 4 and urged that the proposed rules be revised to require that air quality measurements be performed after every use of combustion engine-powered equipment and prior to the time that skaters step on the ice. She indicated that the EPA recommends that air testing be done at least after every use of combustion engines and questions why the Department has ignored this recommendation. She noted that arenas are using truck-like equipment and lawnmower-like machines that produce dangerous levels of carbon monoxide and nitrogen dioxide, and these gases can accumulate in the air without warning, particularly if ventilation fails or an unforeseen event occurs. She asserted that ice edging can take from one to two hours to be completed, and cited an EPA small engine study showing that such equipment has the capacity of emitting 2,000 ppm of carbon monoxide, compared to 150 ppm for an ice resurfer. She pointed out that the Department indicated in its SONAR that it, too, had observed measurable carbon monoxide levels hours after arenas had used edging equipment. In her view, the only way to make sure the air is safe is to test it every day, many times a day. She further contended that testing more frequently in accordance with EPA recommendations would not result in significant costs for ice arenas apart from more frequent calibration of handheld monitors.<sup>165</sup>

117. Jack Rossbach, an industrial hygienist, testified that ice edging operations can generate a significant amount of carbon monoxide (up to 20,000 ppm) and the amount of time edging takes to complete can vary from thirty minutes to up to eight hours in times of heavy use of the rink. He stated that, in April 2012, he used a handheld monitor to test carbon monoxide levels in a local metropolitan area ice arena twenty minutes after ice edging equipment had been operated. No one was using the rink at this time; only arena employees were present. The carbon monoxide levels on

<sup>163</sup> Comments of G. Mack (Nov. 26, 2012).

<sup>164</sup> Department's Rebuttal Comments at 3.

<sup>165</sup> Test. of L. Davis; Public Ex. 1 at 1-3; Comments of L. Davis (Dec. 3, 2012) at 1-2; Comments of L. Davis (Dec. 10, 2012) at 1-2.

the ice ranged from 20 to 44 ppm. The concentration in the stands was fairly steady at 15 ppm, the refreshment area readings were 0 to 1 ppm, and the entry area reading was 2 ppm. An hour after the initial readings, Mr. Rossbach checked again and found that the carbon monoxide level had moderated to 14-20 ppm throughout the rink area. Mr. Rossbach asserted that it is clear that an edging process using a gasoline-powered edger can be a short-term significant source of carbon monoxide. Mr. Rossbach urged the use of continuous monitoring with a ventilation capability if carbon monoxide levels rise above 12.5 ppm. He also recommended that ventilation be enhanced during the edging process and workers operating the edger also be personally monitored. He agreed that skaters should not be allowed on the ice after the gasoline-powered edging until levels of carbon monoxide have dropped.<sup>166</sup>

118. Mr. Rossbach testified that he also took carbon monoxide readings in a different rink located in the same arena complex while a propane-powered Zamboni equipped with a catalytic converter was in the process of resurfacing the ice. Carbon monoxide in that rink was measured at 12 ppm with no variation above the rink, alongside the rink, and in the walking area above. He stated that it appears that a properly tuned Zamboni using propane and with a catalytic converter is capable of keeping the carbon monoxide down to a reasonable level if some ventilation is used.<sup>167</sup>

119. Joe Blum testified during the public hearing that, in his experience, carbon monoxide levels after the use of a Zamboni typically reach 10 ppm and sometimes are as high as 30 ppm. He is concerned about the exposure of children who remain at rinks beyond the two hours they may spend skating, and urged further protection to ensure their safety.<sup>168</sup>

120. Dr. Kathleen Higgins, a nationally certified Respiratory Therapist, Doctor of Chiropractic and Naturopath, urged that air testing be required after each use of a non-electric Zamboni machine, before skaters go back on the ice. She noted that carbon monoxide attaches 100 times more powerfully than oxygen to hemoglobin. She asserted that only a 0.1% of carbon monoxide in the air will eventually lead to 50% of the hemoglobin being combined to form carboxyhemoglobin, and pointed out that this very powerful carbon monoxide attachment and resulting oxygen deprivation can be dangerous and/or deadly to humans. Due to the type of exercise activity performed in ice arenas, Dr. Higgins maintained that carbon monoxide poisoning is even more likely due to the type of exercise activity performed in ice arenas, since all factors that speed respiration and circulation increase the body's rate of carbon monoxide uptake and poisoning. In her view, children represent the "canary in the mine" because they are smaller and run an increased risk of carbon monoxide poisoning. She indicated that early diagnosis is often missed because symptoms can vary from flu-like symptoms to lightheadedness or asthma.<sup>169</sup>

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<sup>166</sup> Test. of J. Rossbach at Public Hearing (Nov. 13, 2012); Public Ex. 2.

<sup>167</sup> *Id.*

<sup>168</sup> Test. of J. Blum at Public Hearing (Nov. 13, 2012).

<sup>169</sup> Comments of Kathleen Higgins (filed Dec. 1, 2012).

121. Numerous other individuals commenting on the proposed rules, including Chad Baker,<sup>170</sup> Peggy Johnson,<sup>171</sup> Milissa Burdette,<sup>172</sup> Celia Baker,<sup>173</sup> Terry Frazerhurst,<sup>174</sup> Jeanette Meidal,<sup>175</sup> Jim Forsberg,<sup>176</sup> Elizabeth Butterfield,<sup>177</sup> John Davis,<sup>178</sup> Carol Garborg,<sup>179</sup> Susan Davis,<sup>180</sup> Rebecca Foss,<sup>181</sup> Jon Hoffmeister,<sup>182</sup> and Kevin Low,<sup>183</sup> recommended that more stringent air testing be required to be done after each use of ice grooming machines.

122. In its response, the Department indicated that it had considered the recommendations that air quality measurements be performed after every use of resurfacing equipment, but ultimately rejected those recommendations as overly burdensome, costly, and unnecessary. The Department relied upon its discussion of this issue in the SONAR and its appendices.<sup>184</sup>

123. Ms. Davis and a number of the other individuals commenting on the rules also recommended that a continuous air monitoring device be required in arenas. Ms. Davis asserted that continuous air monitoring devices are available at a very low cost starting at \$2,700 and have already been installed in a few Minnesota ice arenas. She indicated that continuous monitoring devices have a setting where ventilation is automatically engaged to bring the levels of carbon monoxide and nitrogen dioxide down, and have the capability to send reports of air quality to the Department.<sup>185</sup>

124. The Department declined to revise its proposed rules in response to the concerns expressed by Ms. Davis and others. In its post-hearing comments, the Department indicated that it chose to require twice-per-week measurements after resurfacing and once-per-week measurements after edging "as the least restrictive regimen that should alert operators to catch subtle changes in their equipment that could be harbingers of hazards to come." The Department asserted that it is rarely the case that sudden mechanical failures occur that produce dramatic signs that combustion engines are compromising air quality. The Department indicated that the more likely scenario is gradual equipment failure that might go unnoticed. The Department contended that the proposed regimen of routine testing that the operators

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<sup>170</sup> Comments of Chad Baker (filed Nov. 29, 2012).

<sup>171</sup> Comments of P. Johnson (Nov. 28, 2012).

<sup>172</sup> Comments of M. Burdette (Nov. 26, 2012).

<sup>173</sup> Comments of Celia Baker (Nov. 30, 2012).

<sup>174</sup> Comments of T. Frazerhurst (Nov. 30, 2012).

<sup>175</sup> Comments of J. Meidal (Dec. 1, 2012).

<sup>176</sup> Comments of J. Forsberg (Dec. 2, 2012).

<sup>177</sup> Comments of E. Butterfield (Dec. 2, 2012).

<sup>178</sup> Comments of J. Davis (Dec. 2, 2012).

<sup>179</sup> Comments of C. Garborg (Dec. 3, 2012).

<sup>180</sup> Comments of S. Davis (Dec. 4, 2012).

<sup>181</sup> Comments of R. Foss (Dec. 3, 2012).

<sup>182</sup> Comments of J. Hoffmeister (Dec. 3, 2012).

<sup>183</sup> Comments of K. Low (Dec. 3, 2012).

<sup>184</sup> Specifically, the Department cited the SONAR at 32-33; Appendix B at 18-19; and Appendix G. See Department's Initial Comments at 1.

<sup>185</sup> Test. of L. Davis at Public Hearing (Nov. 13, 2012); Public Ex. 1; Comments of L. Davis at 2 (Dec. 3, 2012).

are required to do under the proposed rules when the air contains its highest levels of contaminants will reflect incremental increases in contaminants and will enable operators to catch these smaller deviations and take the necessary action to avert problems and maintain acceptable air quality. The Department indicated that it added Item B to Subpart 4 of the proposed rules to give regulated parties the flexibility to use continuous monitoring systems. It also emphasized that the training requirement set forth in part 4620.4450 of the proposed rules will ensure that operators know how to respond to changing conditions and follow through accordingly.<sup>186</sup>

125. In her further response, Ms. Davis continued to argue that testing after each use of fuel-powered equipment is necessary in order to take into consideration the possibility of ventilation system failures, user errors, and equipment failure.<sup>187</sup>

126. It is again evident that reasonable persons differ about the frequency of the air quality testing that should be required under the proposed rules. But, as discussed above, an agency is permitted to make choices between possible approaches as long as the choice it makes is rational. It is not the proper function of the Administrative Law Judge to determine which policy alternative presents the “best” approach, since this would invade the policy-making discretion of the agency. The question is, rather, whether the choice made by the agency is one that a rational person could have made.<sup>188</sup>

127. The Administrative Law Judge concludes that the Department has shown that there is a rational basis for the air testing requirements it has chosen to include in Part 4620.4510 of the proposed rules. The Department has provided a sufficient explanation of the evidence on which it is relying and how the evidence connects rationally with the approach it chose to take in the proposed rules, in accordance with applicable case law.<sup>189</sup> The choice made by the Department is one that a rational person could have made, and is not arbitrary or unreasonable. Accordingly, the Administrative Law Judge finds that the Department has adequately demonstrated the need for and reasonableness of Part 4620.4510 of the proposed rules.

#### **Part 4620.4600 – Failure to Maintain Air Quality**

128. Subpart 1 of part 4620.4600 of the proposed rules requires arena owners/operators to take immediate corrective action when measurements of more than 20 ppm of carbon monoxide or 0.3 ppm of nitrogen dioxide are made in an area of the arena building that is open to the public. Under the rules, corrective action must include (1) increasing the ventilation rate immediately and (2) suspending the use of internal combustion-powered equipment. The owner/operator is required to continue corrective action until measurements show not more than 20 ppm of carbon monoxide and not more than 0.3 ppm of nitrogen dioxide.

<sup>186</sup> Department's Initial Comments at 2.

<sup>187</sup> Comments of L. Davis (Dec. 10, 2012) at 2.

<sup>188</sup> *Federal Sec. Adm'r v. Quaker Oats Co.*, 318 U.S. 218, 233 (1943).

<sup>189</sup> *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d at 244.

129. Subpart 2 requires arena owners/operators to conduct and document the following air quality tests to confirm the effectiveness of the corrective action: (1) tests must be conducted at 20-minute intervals until measurements show not more than 20 ppm of carbon monoxide and not more than 0.3 ppm of nitrogen dioxide; (2) tests must be done 20 minutes after the next five uses of ice maintenance equipment; and (3) tests must be done at least once per day for the next three days of arena operation.

130. Subpart 3 of the proposed rules requires that, whenever corrective action is required under Subpart 1, the arena owner/operator submit a report to the Commissioner within five business days that includes an explanation of why corrective action was necessary, a description of the immediate corrective actions that were taken, a record of all air quality tests required by Subpart 2, and an action plan to prevent a reoccurrence.

131. Finally, Subpart 4 of the proposed rules specifies that the owner/operator must evacuate an area of the arena building whenever the following circumstances occur: (1) measured carbon monoxide air concentrations exceed 85 ppm or measured nitrogen dioxide air concentrations exceed 2.0 ppm for more than five minutes; (2) measured carbon monoxide air concentrations exceed 40 ppm or measured nitrogen dioxide air concentrations exceed 0.6 ppm for more than one hour after originally measuring unacceptable air quality conditions; or (3) measured carbon monoxide air concentrations exceed 20 ppm or measured nitrogen dioxide air concentrations exceed 0.3 ppm for more than two hours after originally measuring unacceptable air quality conditions. If evacuation becomes necessary, the owner/operator must contact the local fire department as soon as possible to request assistance in evacuating the facility and assessing the hazard, and contact the Department upon completing the evacuation. The evacuated areas may only be reoccupied by the public if acceptable air quality conditions are measured, corrective measures have been taken to prevent further incidence of unacceptable air quality conditions, and acceptable air quality conditions and corrective measures are verified by the local fire department or the Department.

132. Ms. Davis objected to Subparts 1, 2, and 4 of the proposed rule. She argued that Subpart 4, item A, would allow people in the arena to be exposed to unacceptable levels of carbon monoxide and nitrogen dioxide for an hour. She recommended that the rules be revised to require evacuation whenever measured carbon monoxide air concentrations exceed 30 ppm or measured nitrogen dioxide air concentrations exceed 0.5 ppm for more than five minutes, or whenever measured carbon monoxide air concentrations exceed 10 ppm or measured nitrogen dioxide air concentration exceeds 0.1 ppm for more than one hour. She contended that the Department did not adopt the most protective AEGL levels with respect to evacuation, and argued that this failure leaves children vulnerable to these high levels for one hour.<sup>190</sup>

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<sup>190</sup> Test. of L. Davis at Public Hearing (Nov. 13, 2012); Public Ex. 1; Comments of L. Davis (Dec. 3, 2012).

133. Chad Baker urged the Department to consider the effectiveness of the evacuation plans in place at ice arenas because unsafe levels of carbon monoxide can impair judgment, particularly of elderly citizens and children.<sup>191</sup> Peggy Johnson commented that an evacuation plan and instructions should be posted at arenas, similar to the postings done for fire and storm emergencies.<sup>192</sup> Laura Erickson,<sup>193</sup> Milissa Burdette,<sup>194</sup> Amy Hoyord,<sup>195</sup> Joshua Strayer,<sup>196</sup> Rebecca Foss,<sup>197</sup> Kevin Low,<sup>198</sup> and several others also recommended implementation of safer and more effective evacuation plan so that levels are not too high for young children or the elderly to breathe before they evacuate.

134. In its response, the Department stood by the rule as originally proposed. The Department emphasized that the proposed rules for evacuation at 85 ppm carbon monoxide and 2.0 ppm nitrogen dioxide, while based on one-hour average limits, actually require a regulated party to evacuate the arena when these limits have been exceeded for only five minutes in order to avoid the health effects expected with exposure to these levels of contaminants over an entire hour. Because evacuation is a serious undertaking, subpart 4 requires more than a single reading in order to take into account the fluctuations that can occur. The proposed rules include three standards at intervals of five minutes, one hour, and two hours to address differing levels of contaminant exposure. According to the Department, this is not only to protect public health but also to recognize that evacuations should not occur unless necessary.<sup>199</sup>

135. In its SONAR, the Department indicated that it had lowered the proposed evacuation level from 125 ppm to 85 ppm measured on a one-hour basis. It contended that the 85 ppm level correlates with a ~ 4% increase in COHb levels and would protect against potentially severe adverse health effects in sensitive individuals, particularly those with latent or diagnosed coronary heart disease, children, and fetuses of pregnant women. The Department acknowledged that it is "important to have an evacuation level that will allow for people to get out of the arena before people experience psychomotor effects, such as reduced coordination and tracking, or impaired vigilance, generally accepted as occurring at COHb levels ranging from 5-7%."<sup>200</sup>

136. In Exhibit E attached to the SONAR, the Department explained:

The 85 ppm evacuation level was derived from the final AEGL [Acute Exposure Guideline Level] document for CO issued in July 2008 under the Federal Advisory Committee Act (FACA) and published on the US EPA

<sup>191</sup> Comments of Chad Baker (Nov. 29, 2012).

<sup>192</sup> Comments of P. Johnson (Nov. 28, 2012).

<sup>193</sup> Comments of L. Erickson (Nov. 30, 2012).

<sup>194</sup> Comments of M. Burdette (Nov. 26, 2012).

<sup>195</sup> Comments of A. Hoyord (Dec. 1, 2012).

<sup>196</sup> Comments of J. Strayer (Dec. 2, 2012).

<sup>197</sup> Comments of R. Foss (Dec. 3, 2012).

<sup>198</sup> Comments of K. Low (Dec. 3, 2012).

<sup>199</sup> Department's Initial Comments at 3.

<sup>200</sup>

website. MDH has taken the 83 ppm AEGL-2 over one hour and rounded it to 85 ppm for ease of use. The AEGL 2 is defined as the airborne concentration (expressed as ppm or mg/m<sup>3</sup>) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects, or an impaired ability to escape. In this case, the AEGL-2 is based on COHb target level of 4%.<sup>201</sup>

137. The Administrative Law Judge finds that the Department has established the need for and reasonableness of an evacuation level of 83 ppm, in order to provide a level of protection from an increase in COHb above 4%. However, the Department did not provide any explanation of why the proposed rules did not specify a level of 83 ppm, what was meant by "ease of use," or why it rounded up to 85 rather than down to 80. It is not needed or reasonable to select a level higher than 83 ppm, since 83 ppm is the point at which it is predicted that the general population could experience irreversible or other serious health effects, or an impaired ability to escape. Moreover, Subpart 1 of Part 4620.4550 of the proposed rules requires that air quality measuring devices must be capable of measuring carbon monoxide air concentrations in a range from 1 to 100 ppm in increments of 1 ppm, so it should be possible to make a precise measurement of 83 ppm. As a result, the Administrative Law Judge concludes that the Department has not shown the need for or reasonableness of its selection of an evacuation level of 85 ppm. This constitutes a defect in the proposed rule. To cure the defect, the Department should specify that the evacuation level will be 83 ppm.

138. Proposed Part 4620.4600, if modified as suggested to correct the defect, has been shown to be needed and reasonable to define when corrective measures must be taken. The Administrative Law Judge concludes that the Department has shown that there is a rational basis for the evacuation levels it has set forth in the proposed rules for carbon monoxide and nitrogen dioxide. The Department has provided an adequate explanation of the evidence on which it is relying and how the evidence connects rationally with the approach it chose to take in the proposed rules, in accordance with applicable case law.<sup>202</sup> The choice made by the Department is one that a rational person could have made, and is not arbitrary or unreasonable.<sup>203</sup> Accordingly, the Administrative Law Judge finds that the Department has adequately demonstrated the need for and reasonableness of Part 4620.4600 of the proposed rules.

#### **Part 4620.4700 – Other Fuel-Burning Equipment**

139. Part 4620.4700 of the proposed rules applies to situations when equipment other than ice maintenance equipment that is capable of producing carbon monoxide or nitrogen dioxide but is not directly vented to the outdoors is used for operating or maintaining the arena. The proposed rule generally requires that owners or operators of an indoor ice arena open to the general public "must measure air quality

<sup>201</sup> SONAR, Appendix E at 58 (emphasis added).

<sup>202</sup> *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d at 244.

<sup>203</sup> *Federal Sec. Adm'r v. Quaker Oats Co.*, 318 U.S. 218, 233 (1943).



conditions and ensure acceptable air-quality in the arena building" when operating such equipment. The language of the proposed rule makes the provisions set forth in part 4620.40 600 relating to the failure to maintain air quality applicable to such equipment. However, the proposed rule simply states that air quality conditions "must be measured and reports made as the commissioner directs depending upon the specific type of activity to be conducted in the building."

140. In addition to the ice maintenance equipment encompassed in the other parts of the proposed rules, the Department noted that indoor ice arena operators occasionally use other fuel-burning equipment that emit carbon monoxide or nitrogen dioxide, such as unvented, fuel-burning generators, portable heaters, personnel lists, and power washers. In the SONAR, the Department indicated that had rewritten part 4620.4700 to regulate the use of these other types of machines. Although this equipment is not considered ice maintenance equipment, the Department noted that it has the potential to create or contribute to instances of unacceptable air quality conditions in indoor ice arenas.<sup>204</sup>

141. The Department noted in the SONAR that, at the recommendation of the advisory committee and to meet its reasonableness requirement, it had proposed that the requirements of this rule part apply only to equipment that is not directly vented to the outdoors. As a result, equipment such as existing furnaces, boilers, and water heaters that vent combustion byproducts directly to the outdoors are exempt from the requirements of this rule. The Department indicated that the rule requirements apply when the arena is open to the general public in order to allow normal off-season maintenance and remodeling activities to occur without the burden of air monitoring and maintenance of acceptable air quality when the public is not present. The Department acknowledged that OSHA regulations would remain in place to protect the workers in such a situation.<sup>205</sup>

142. The Department further noted in the SONAR that it accepted a committee recommendation to withdraw proposed language in the rule that would have required the regulated party to notify the Department each time this type of equipment was brought into use in an indoor ice arena. The Department noted that the advisory committee argued that this put an unreasonable burden on regulated parties and pointed out that there might be times that Department staff are unavailable to be notified (for example, on weekends). The Department thus concluded that requiring notification every time an engine or equipment was brought in would be unreasonable.<sup>206</sup>

143. As written, the proposed rule indicates that owners or operators of ice arenas must measure air quality conditions when fuel-burning equipment other than ice maintenance equipment is used and make reports "as the Commissioner directs depending upon the specific type of activity to be conducted in the building." However, the proposed rule does not specify any mechanism under which arena owners or operators would provide notification to the Departments of the equipment they use, nor

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<sup>204</sup> SONAR at 39.

<sup>205</sup> *Id.* at 39-40.

<sup>206</sup> *Id.* at 40.

does the proposed rule set forth a list of various types of equipment and the corresponding testing and reporting requirements. As a result, there is no assurance that the Commissioner will know about the use of this additional equipment and have an opportunity to provide direction to the owner or operator about the applicable testing and reporting requirements. Accordingly, the Administrative Law Judge concludes that the Department has failed to show that the proposed rule is reasonable and consistent with the purposes of this rule part. This constitutes a defect in the proposed rule. To correct the defect, the Administrative Law Judge recommends that the Department include language in the proposed rule requiring arena owners or operators to provide advance notice to the Department of the types of fuel-burning equipment other than ice maintenance equipment that they propose to use in order to receive appropriate direction from the Department regarding the testing and reporting requirements that will apply to that equipment.

144. Proposed Part 4620.4700, if modified as suggested to correct the defect, has been shown to be needed and reasonable to clarify the requirements applicable to types of fuel-burning equipment that may be used in ice arenas for purposes other than to resurface or edge the ice. Inclusion of the recommended language to correct the defect will not result in a rule that is substantially different from the rule as originally proposed.

#### **Part 4620.4800 - Enforcement**

145. Part 4620.4800 of the Department's existing rules is entitled "Revocation or Suspension of Approval; Reinstatement." It states that the Commissioner "may suspend or revoke the approval granted under 4620.4100 and 4620.4700 upon the finding of violations of the provisions of part 4620.3900 to 4620.4800. All proceedings shall be in accordance with the Minnesota Administrative Procedure Act, Minnesota Statutes, Chapter 14." The current rule goes on to state that a suspended or revoked certificate of approval shall be returned to the Commissioner and that reinstatement shall be in accordance with the suspension or revocation order and upon an adequate showing that the grounds for suspension or revocation shall not recur.

146. The Department's proposed revision to this part of the rules would change the heading to "Enforcement," delete the language contained in the current rules, and substitute the following: "The commissioner *may* take one or more enforcement actions listed in Minnesota Statutes, sections 144.989 to 144.993, for a violation of this chapter." (Emphasis added.) In the SONAR, the Department stated that the only material change it is proposing is to repeal the reference to part 4620.4700, which now applies to fuel-burning equipment other than ice maintenance equipment and does not include content related to certification.<sup>207</sup>

147. A rule must be sufficiently specific to provide fair warning of the type of conduct to which the rule applies.<sup>208</sup> Discretionary power may be delegated to

<sup>207</sup> *Id.*

<sup>208</sup> *Cullen v. Kentucky*, 407 U.S. 104, 110 (1972); *Thompson v. City of Minneapolis*, 300 N.W.2d 763, 768 (Minn. 1980).

administrative officers "[i]f the law furnishes a reasonably clear policy or standard of action which controls and guides the administrative officers in ascertaining the operative facts to which the law applies, so that the law takes effect upon these facts by virtue of its own terms, and not according to the whim or caprice of the administrative officers."<sup>209</sup> By stating that the Commissioner "may" take one or more enforcement actions listed in Minnesota Statutes, sections 144.99 to 144.993 if a violation of the rules occurs, the proposed rule appears to grant unfettered discretion to the Commissioner to take or not take action in response to rule violations, without providing any criteria to guide the Commissioner in making that determination. The proposed rule is also inconsistent with due process principles because (1) it removes the prior language which provided regulated parties with notice of their opportunity to challenge a suspension or revocation of a certificate of approval under Minnesota Statutes, Chapter 14, and (2) specifies only that the Commissioner has authority to take one or more enforcement actions where an individual has violated the rules, without alluding to the right of the affected person to receive notice of the allegations and an opportunity to challenge them through a reconsideration or hearing process that is available under applicable statutes.<sup>210</sup> As a result, the Administrative Law Judge concludes that this rule part is defective. To cure this defect, the Administrative Law Judge recommends that the language of the proposed rule be modified to include language similar to the following:

Violations of the requirements of parts 4620.3900 to 4620.4700<sup>211</sup> shall constitute grounds for the Commissioner to take one or more of the enforcement actions set forth in Minnesota Statutes, sections 144.989 to 144.993, subject to the notice and appeal provisions set forth in applicable law.

148. The proposed modification to the language of this subpart to correct the defect would not render the rule substantially different from the rule as originally proposed for adoption. With the modification to correct the defect, proposed Part 4620.4800 has been shown to be needed and reasonable to notify affected parties and members of the public of the enforcement authority afforded to the Commissioner.

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<sup>209</sup> *Lee v. Delmont*, 228 Minn. 101, 113, 36 N.W.2d 530, 538 (1949); accord *Anderson v. Commissioner of Highways*, 126 N.W.2d 778, 780 (Minn. 1964).

<sup>210</sup> See, e.g., Minn. Stat. § 144.99, subd. 3 (right to request reconsideration of a correction order); Minn. Stat. § 144.99, subds. 8 and 9 (right to notice of allegations and opportunity to request contested case hearing if application for certificate of approval is denied or certificate is suspended or revoked); Minn. Stat. §§ 144.99, subd. 4, and 144.991, subds. 2, 5, and 10 (right to notice of allegations and opportunity to request an expedited contested case hearing to challenge an administrative penalty order).

<sup>211</sup> It is recommended that the revision refer to the specific substantive provisions of the rules applicable to indoor ice arenas rather than referring to "this Chapter."

## **Part 4620.4900 – Variance Relating to Indoor Ice Arenas**

149. The Department's existing rules state that the Commissioner "shall" grant variances to its enclosed sports arena rules according to the procedures and criteria specified in parts 4717.7000 to 4717.7050, except with respect to the part of the current rules that require documentation of air quality conditions and adherence to the current carbon monoxide and hydrogen dioxide air quality standards. The only modifications made by the proposed rules to this section are a slight change in the wording of the heading, an updated reference to the provision in the proposed rules relating to the acceptable air quality standards for carbon monoxide and hydrogen dioxide, and substitution of the word "may" for "shall."

150. Ms. Davis challenged the need for reasonableness of the corresponding provision in the motorsports arena rules and argued that no variances should be granted to the requirements of the proposed rules.<sup>212</sup> However, Minn. Stat § 14.055 specifies that individuals or entities may petition an agency for a variance from a rule adopted by the agency, as it applies to the circumstances of the petitioner, and authorizes agencies to adopt rules establishing general standards for granting mandatory or discretionary variances from its rules.<sup>213</sup> Moreover, the Department has previously adopted rules that make it clear that a party may ask the Commissioner to grant a variance from the enclosed sports arena rules with the exception of the provision requiring documentation of air quality conditions and establishing the current carbon monoxide and nitrogen dioxide limits.<sup>214</sup> As a result, the Department's recognition in the proposed rules that an individual or entity has the right to request a variance of all of the provisions of the proposed rules except the rule relating to acceptable air quality is consistent with current law.

151. The Department's use of the word "may," however, appears to grant unfettered discretion to the Commissioner to grant or not grant variances even if they are otherwise proper under the procedures and criteria set forth in Minn. R. 4717.7000 to 4717.7050, without providing any criteria to guide the Commissioner in making that determination. For the reasons discussed in Finding 147 above, this apparent grant of unfettered discretion to the Commissioner constitutes a defect in the proposed rules. To correct the defect, the Department should use the word "shall" rather than "may."

152. Proposed Part 4620.4900, if modified as suggested to correct the defect, has been shown to be needed and reasonable to clarify the procedures for requesting a variance. Inclusion of the recommended language to correct the defect will not result in a rule that is substantially different from the rule as originally proposed.

<sup>212</sup> Comments of L. Davis (Dec. 2, 2012).

<sup>213</sup> Minn. Stat. § 14.05, subs. 1 and 5.

<sup>214</sup> Minn. R. 4717.7000, subp. 1(H).

## **II. Provisions Relating to Indoor Motorsports Arenas (Parts 4620.5000-4620.5950)**

### **Part by Part Analysis of Proposed Rules Relating to Motorsports Arenas**

153. As noted above, only the provisions of the proposed rules that received comments or otherwise require discussion are discussed below. The Department has demonstrated that the remaining rules are needed and reasonable, and within its statutory authority.

#### **Part 4620.5200 – Acceptable Air Quality**

154. Part 4620.5200 of the proposed rules specifies that the owner or operator of an indoor motorsports arena must maintain acceptable air quality conditions at all times in areas of the arena building that are open to the public. Acceptable air quality conditions are defined as one-hour average air concentrations of not more than 30 ppm of carbon monoxide and one-hour average air concentrations of not more than 0.3 ppm of nitrogen dioxide. The proposed motorsports arena rules thus reflect a higher action level (30 ppm) for carbon monoxide than the proposed ice arena rules (20 ppm), but incorporate the same action level for hydrogen dioxide.

155. Linda Davis filed the only comment that was received relating to the motorsports arena rules. She pointed out that motorsports events range from motorcycles to tractor pulls or monster truck events and draw substantial numbers of spectators, including a significant number of young children. During these events, she indicated that cars, trucks, go-carts, and motorcycles are running and revving their engines inside a closed building. She contended that the carbon monoxide and nitrogen dioxide emissions “can reach the unsuspecting public within seconds.”<sup>215</sup>

156. Ms. Davis urged that the action levels set forth in Part 4620.5200 be rejected for several reasons, many of which are similar to those discussed above with respect to the ice arena rules. She asserted that monster truck and tractor pull events can last an average of three hours, and amateur events such as motocross and go-cart racing can last all day. As a result, she contended that acceptable air quality standards for carbon monoxide and nitrogen dioxide in motorsports arenas should protect users that might spend an entire day in the arena. She also continued to recommend that the action levels be set at 9 ppm for carbon monoxide and 0.1 ppm for nitrogen dioxide.<sup>216</sup>

157. In response, the Department indicated that, based upon its routine inspections of motorsports arenas and events, it has determined that participants spend only a short time—typically less than five minutes at a time—on the track (where contaminant levels are highest), and spectators typically spend no more than two hours in their seats (where contaminant levels are lower). In addition, the Department

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<sup>215</sup> Comment of L. Davis (Dec. 2, 2012).

<sup>216</sup> *Id.*

asserted that spectators usually spend some time in the arena lobby or outside the building during an event.<sup>217</sup>

158. The Department explained in its SONAR that it decided to retain the 30 ppm action level for carbon monoxide set forth in the current rules with respect to motorsports arenas in part because there is a greater awareness among motorsports arena participants and spectators that they will be exposed to combustion byproducts, primarily carbon monoxide, due to the nature of the activity they are attending. The Department indicated that participants typically sign waivers acknowledging that they will be exposed and signs are typically posted during events notifying spectators that exposure to carbon monoxide will occur. In the Department's view, this awareness "provides a greater opportunity for sensitive individuals to avoid or limit exposure than is afforded in an ice arena, where participants and spectators might not be aware that the arena operators have recently used internal combustion powered equipment." In addition, the Department stressed that motorsports arena participants generally do not exert themselves physically to the degree that is typical of ice arena users or for as long a period of time. The Department is proposing to reduce the action level for hydrogen dioxide to 0.3 ppm for the same reasons discussed above with respect to the ice arena rules.<sup>218</sup>

159. The Administrative Law Judge concludes that the Department has shown that Part 4620.5200 is needed and reasonable to establish baseline requirements for acceptable air quality in motorsports arenas. Based upon the information provided in its post-hearing submissions and its SONAR and appendices, the Department has explained the evidence on which it is relying and has demonstrated a rational basis for the levels reflected in the proposed rules.

#### **Part 4620.5600 – Measurement of Air Quality Conditions**

160. Pursuant to Subpart 3, Item A of the proposed rules, owners and operators must measure nitrogen dioxide air concentrations "as the commissioner directs depending on the specific type of activity to be conducted in the arena." In the SONAR, the Department explained that, based on relevant research and the Department's experience, nitrogen dioxide levels generally do not exceed acceptable air quality levels during motorsports events. The Department indicated that emission profiles for motorsports vehicles typically skew very strongly toward carbon monoxide and, if carbon monoxide levels are maintained at acceptable levels, nitrogen dioxide is typically not detected in the arena air. As a result, the Department indicated that it has generally not required that regulated parties monitor nitrogen dioxide concentrations. The Department noted that combustion of certain fuels such as propane might result in measurable nitrogen dioxide emissions, and believes it is reasonable for the rules to be flexible and provide the Department with authority to require nitrogen dioxide measurements if the situation merits it.<sup>219</sup>

<sup>217</sup> Department's Rebuttal Comments (Dec. 10, 2012).

<sup>218</sup> SONAR at 42-43.

<sup>219</sup> *Id.* at 48-49 and Appendix C at 35.

161. Pursuant to Subpart 3, Item B of the proposed rules, owners and operators in certified arenas must measure carbon monoxide air concentrations at least two days per week; at least three hours per week during maximum use of motorsports vehicles; and as the Commissioner deems necessary. Owners and operators of special indoor motorsports events must measure carbon monoxide air concentrations on each day of motorsport vehicle use; during all operating hours; and as the Commissioner deems necessary. If the individuals riding or driving the motorsports vehicles involved in the event are not paid performers, air quality measurements must be made at a location on the track that represents average carbon monoxide concentrations and must be recorded at least every 15 minutes when motorsports vehicles are used in the arena. If spectators are present during motorsports activities, the operator must measure air quality conditions in the spectator area of the arena at the location of poorest air quality and record the measurements at least once every 15 minutes when motorsports vehicles are used in the arena. Owners or operators are required to keep a record of these measurements and make it to available to the Commissioner upon request.

162. The Department explained in the SONAR that it proposed different measurement location and documentation requirements based on whether motorsports vehicle operators are paid performers or members of the general public because the Department is responsible for protecting the health of the general public while the Department of Labor and Industry's Occupational Safety and Health Division is responsible for the safety and health of employee performers. The Department further explained that measurement is required in the location of poorest air quality because that will be an indication of the worst case scenario.<sup>220</sup>

163. In the SONAR, the Department indicated that it "acquiesced" to advisory committee concerns about its original proposal to require that measurements be recorded after every heat or discrete run on the track. The Department explained that it accepted the committee members' argument that documenting testing at least every 15 minutes would be simpler, consistent with requirements for spectator area testing, and similar to the testing regime that the Department has been requiring under the authority to prescribe testing requirements contained in Part 4620.4700 of its existing rules. The Department further explained that it believes that the 15-minute measurement frequency required by the proposed rules will account for temporal variances in measurements and allow regulated parties to conveniently determine one hour average air concentrations.<sup>221</sup>

164. Ms. Davis commented that the Department, in response to pressure from arena owners participating in the advisory committee, modified its original intention to require continuous air monitoring during motorsports events and instead is merely requiring that an air quality test be performed every 15 minutes.<sup>222</sup>

165. In response, the Department indicated that Ms. Davis had misinterpreted the proposed rules. The Department stated that the proposed rules do, in fact, require

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<sup>220</sup> *Id.* at 50.

<sup>221</sup> *Id.* at 50-51.

<sup>222</sup> Comments of L. Davis (Dec. 2, 2012).

continuous air monitoring, as documented by recording these measurements every 15 minutes. The Department emphasized that the language contained in Subpart 3, item B of the proposed rules makes it clear that monitoring is required "during all operating hours" and the recording of measurements is required "at least every 15 minutes." The Department indicated that the proposed rules are consistent with the Department's current practice of requiring continuous monitoring to be conducted, with measurements recorded at intervals of 10 to 15 minutes, and stated that the rules were merely intended to codify this protocol.<sup>223</sup>

166. The Administrative Law Judge finds that the Department has demonstrated that Part 4620.5600 is needed and reasonable to clearly set forth the responsibilities of owners and operators with respect to the measurements of air quality conditions.

#### **Part 4620.5700 – Failure to Maintain Air Quality**

167. Subpart 1 of Part 4620.5700 of the proposed rules requires that the owner or operator must take immediate corrective action when measurements of more than 30 ppm of carbon monoxide or more than 0.3 ppm of nitrogen dioxide are made for more than 15 minutes in an area of the arena building that is open to the public. Corrective action must include (1) increasing the ventilation rate immediately; and (2) suspending internal combustion-powered equipment use, if carbon monoxide measurements remain in excess of 30 ppm or nitrogen dioxide measurements remain in excess of 0.3 ppm for more than one hour after an original exceeding measurement. The owner or operator must continue corrective action until measurements show not more than 30 ppm of carbon monoxide and not more than 0.3 ppm of nitrogen dioxide in all areas of the arena building that are open to the public.

168. Subpart 2 of the proposed rules requires that the owner or operator must conduct and document air quality tests to confirm the effectiveness of the corrective actions at 15-minute intervals until measurements show not more than 30 ppm of carbon monoxide and not more than 0.3 ppm of nitrogen dioxide, and at 15-minute intervals for a least one hour per day for the subsequent three days of arena operation.

169. Subpart 3 of the proposed rules requires that, whenever corrective action is necessary under Subpart 1, the owner or operator must submit a report to the Commissioner within five business days. The report must explain why corrective action was necessary, describe what immediate corrective actions were taken, provide a record of all air quality tests, and specify an action plan to prevent a recurrence.

170. Subpart 4 of the proposed rules relates to conditions when arena evacuation is necessary. The proposed rules specify that the owner or operator must evacuate an area of the arena building whenever: (1) measured carbon monoxide air concentrations exceed 85 ppm or measured nitrogen dioxide concentrations exceed 2.0 ppm for more than 15 minutes; or (2) measured carbon monoxide air concentrations exceed 30 ppm or measured nitrogen dioxide air concentrations exceed 0.3 ppm for

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<sup>223</sup> Department's Rebuttal Comments at 4.



more than two hours after originally measuring unacceptable air quality conditions. The evacuation and reoccupation procedures are the same as those set forth in the ice arena rules.

171. In the SONAR, the Department indicated that it is reasonable that only measurements that remain above the “ceiling” or not-to-exceed level for the contaminants for a brief period of time (15 minutes) will trigger evacuation, in order to account for brief fluctuations in measured levels and due to the serious nature of an arena evacuation. The Department also asserted that requiring evacuation if carbon monoxide air concentrations exceed 30 ppm or nitrogen dioxide concentrations exceed 0.3 ppm for more than two hours after unacceptable air quality conditions are measured is warranted to ensure that the regulated party cannot continue to operate indefinitely with unacceptable air quality conditions simply because the ceiling level is not exceeded and corrective actions are being taken. The Department indicated that the values are based on one-hour limits to allow for a reasonable sampling or monitoring protocol. If the elevated one-hour concentration remains for a second hour, it is evident that mitigation is not working and the arena must be evacuated. As in the ice arena rules, the Department lowered the proposed evacuation level for carbon monoxide from 125 ppm to 85 ppm.<sup>224</sup>

172. Ms. Davis again expressed concern that the Department used AEGL Level 2 (the threshold at which irreversible harm or other serious, long-lasting adverse health effects or an impaired ability to escape could occur) when setting the evacuation levels rather than AEGL Level 1. She urged the Department to select AEGL Level 1 to make sure that members of the public are able to escape and will not suffer irreversible health effects, and recommended that the carbon monoxide evacuation level be set at 30 ppm. Ms. Davis also objected to the gap of time from 1 hour to 2 hours before an evacuation is mandated and indicated that, under the proposed rules, members of the public could potentially be exposed to 84 ppm of carbon monoxide and/or 1.9 ppm of nitrogen dioxide for up to two hours. She argued that this type of exposure would place members of the public in grave danger of experiencing irreversible health effects and also being unable to evacuate, and urged that the rule be modified to ensure that evacuation should occur no more than one hour after the safe levels have been exceeded.<sup>225</sup>

173. In response, the Department indicated that the scenario posed by Ms. Davis does not reflect the reality of air quality in indoor motorsports arenas. Because of the dynamics of these events, the Department contends that air concentrations fluctuate widely, especially compared to ice arena air. According to the Department, there are spikes in contaminants in motorsports arenas, followed by drops, depending upon how operators structure and pace the events as well as the size and types of vehicles, the building’s ventilation, and other factors. Based upon its observations at facilities and events, the Department believes that it is far more likely that carbon monoxide levels

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<sup>224</sup> SONAR at 53-54.

<sup>225</sup> Comments of L. Davis (Dec. 2, 2012).

would exceed the 15-minute evacuation standard, but further monitoring would show that the levels would drop and the need to evacuate would be averted.<sup>226</sup>

174. For the reasons discussed in Finding 137 above, the Administrative Law Judge finds that the Department has established the need for and reasonableness of an evacuation level of 83 ppm, but has not shown the need for or reasonableness of its selection of an evacuation level of 85 ppm. This constitutes a defect in the proposed rule. To cure the defect, the Department should specify that the evacuation level will be 83 ppm.

175. Proposed Part 4620.5700, if modified as suggested to correct the defect, has been shown to be needed and reasonable to define when corrective measures must be taken in motorsports arenas. The Administrative Law Judge concludes that the Department has shown that there is a rational basis for the evacuation levels it has set forth in the proposed rules for carbon monoxide and nitrogen dioxide. The Department has provided an adequate explanation of the evidence on which it is relying and how the evidence connects rationally with the approach it has chosen to take in the proposed rules, in accordance with applicable case law.<sup>227</sup> The choice made by the Department is one that a rational person could have made, and is not arbitrary or unreasonable.<sup>228</sup> Accordingly, the Administrative Law Judge finds that the Department has adequately demonstrated the need for and reasonableness of Part 4620.5700 of the proposed rules.

#### **Part 4620.5900 - Enforcement**

176. Part 4620.5900 of the proposed rules specifies that the Commissioner "may" take one or more of the enforcement actions listed in Minnesota Statutes, sections 144.989 to 144.993, for a violation of parts 4620.5000 to 4620.5900.

177. For the same reasons discussed in Finding 147 above, the Administrative Law Judge concludes that this rule part is defective because it appears to grant unfettered discretion to the Commissioner to take or not take action in response to rule violations, without providing any criteria to guide the Commissioner in making that determination. The Administrative Law Judge also finds that the proposed rule is inconsistent with due process principles because it merely states that the Commissioner has authority to take one or more enforcement actions where an individual has violated the rules, without alluding to the right of the affected person to receive notice of the allegations and an opportunity to challenge them through a reconsideration or hearing process that is available under applicable statutes.<sup>229</sup> As a result, the Administrative Law Judge concludes that this rule part is defective. To cure this defect, the

<sup>226</sup> Department's Rebuttal Comments at 5.

<sup>227</sup> *Manufactured Hous. Inst. V. Pettersen*, 347 N.W.2d at 244.

<sup>228</sup> *Federal Sec. Adm'r v. Quaker Oats Co.*, 318 U.S. 218, 233 (1943).

<sup>229</sup> See, e.g., Minn. Stat. § 144.99, subd. 3 (right to request reconsideration of a correction order); Minn. Stat. § 144.99, subds. 8 and 9 (right to notice of allegations and opportunity to request contested case hearing if application for certificate of approval is denied or certificate is suspended or revoked); Minn. Stat. §§ 144.99, subd. 4, and 144.991, subds. 2, 5, and 10 (right to notice of allegations and opportunity to request an expedited contested case hearing to challenge an administrative penalty order).

Administrative Law Judge recommends that the language of the proposed rule be modified to include language similar to the following:

Violations of the requirements of parts 4620.5000 to 4620.5800<sup>230</sup> shall constitute grounds for the Commissioner to take one or more of the enforcement actions set forth in Minnesota Statutes, sections 144.989 to 144.993, subject to the notice and appeal provisions set forth in applicable law.

178. The proposed modification to the language of this subpart to correct the defect would not render the rule substantially different from the rule as originally proposed for adoption. With the modification to correct the defect, proposed Part 4620.5900 has been shown to be needed and reasonable to notify affected parties and members of the public of the enforcement authority afforded to the Commissioner under applicable law.

#### **Part 4620.5950 – Variance to Rules Relating to Indoor Motorsports Arenas**

179. Part 4620.5950 of the proposed rules specifies that the Commissioner “may” grant variances to parts 4620.5000 to 4620.5900, except part 4620.5200 [relating to acceptable air quality] only according to the procedures and criteria specified in parts 4717.70000 to 4717.7050.

180. Ms. Davis challenged the need for and reasonableness of this provision and argued that no variances should be granted to the requirements of the proposed rules.<sup>231</sup> The Department emphasized in response that the proposed rule expressly states that the acceptable air quality standard set forth in part 4620.5200 cannot be the subject of a variance. The Department also pointed out that variances can only be granted if the variance “will have no potential adverse effect on public health” and “the alternative measures to be taken . . . are equivalent to or superior to those prescribed in the rule.”<sup>232</sup> The Department declined to delete this portion of the proposed rules.<sup>233</sup>

181. As discussed in Finding 150 above, Minn. Stat § 14.055 permits individuals or entities to file petitions with agencies for a variance from agency rules and authorizes agencies to adopt rules establishing general standards for granting mandatory or discretionary variances from its rules.<sup>234</sup> Moreover, the Department’s previously-adopted rules make it clear that a party may ask the Commissioner to grant a variance from the enclosed sports arena rules with the exception of the provision of the current rules that requires documentation of air quality conditions and establishes carbon monoxide and nitrogen dioxide limits.<sup>235</sup> As a result, the Department’s recognition in the proposed rules that an individual or entity has the right to request a

<sup>230</sup> It is recommended that the revision refer only to the substantive provisions of the motorsports arena rules and not include 4620.5900, which merely addresses the Commissioner’s enforcement authority.

<sup>231</sup> Comments of L. Davis (Dec. 2, 2012).

<sup>232</sup> See Minn. R. 4717.7010, subp. 1(B) and (C).

<sup>233</sup> Department’s Rebuttal Comments at 5.

<sup>234</sup> Minn. Stat. § 14.05, subds. 1 and 5.

<sup>235</sup> Minn. R. 4717.7000, subp. 1 (H).

variance of all of the provisions of the proposed rules except the rule relating to acceptable air quality is consistent with current law.

182. The Department's use of the word "may," however, appears to grant unfettered discretion to the Commissioner to grant or not grant variances even if they are otherwise proper under the procedures and criteria set forth in Minn. R. 4717.7000 to 4717.7050, without providing any criteria to guide the Commissioner in making that determination. For the reasons discussed in Finding 151 above, this apparent grant of unfettered discretion to the Commissioner constitutes a defect in the proposed rules. To correct the defect, the Department should use the word "shall" rather than "may."

183. Proposed Part 4620.5950, if modified as suggested to correct the defect, has been shown to be needed and reasonable to clarify the procedures for requesting a variance. Inclusion of the recommended language to correct the defect will not result in a rule that is substantially different from the rule as originally proposed.

Based on the Findings of Fact, the Administrative Law Judge makes the following:

### **CONCLUSIONS**

1. The Department gave proper notice of the hearing in this matter. The Department has fulfilled the procedural requirements of Minn. Stat. § 14.14 and all other procedural requirements of law or rule.

2. The Department has demonstrated its statutory authority to adopt the proposed rules, and has fulfilled all other substantive requirements of law or rule within the meaning of Minn. Stat. §§ 14.05, subd. 1; 14.15, subd. 3; and 14.50 (i) and (ii), except as noted in Findings 147, 151, 177, and 182.

3. The Department has demonstrated the need for and reasonableness of the proposed rules by an affirmative presentation of facts in the record within the meaning of Minn. Stat. §§ 14.14, subd. 4; and 14.50 (iii), except as noted in Findings 137, 143, and 174.

4. The Administrative Law Judge has suggested action to correct the defects cited in Conclusions 2 and 3, as noted in Findings 137, 143, 147, 151, 174, 177, and 182.

5. Due to Conclusions 2 and 3, this Report has been submitted to the Chief Administrative Law Judge for his approval pursuant to Minn. Stat. § 14.15, subd. 3.

6. Any Findings that might properly be termed Conclusions and any Conclusions that might properly be termed Findings are hereby adopted as such.

7. A Finding or Conclusion of need and reasonableness with regard to any particular rule subsection does not preclude and should not discourage the Department from further modification of the proposed rules based upon this Report and an

examination of the public comments, provided that the rule finally adopted is based on facts appearing in this rule hearing record.

Based on the Conclusions, the Administrative Law Judge makes the following:

### **RECOMMENDATION**

IT IS RECOMMENDED that the proposed rules, as modified, be adopted, except where otherwise noted above.



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BARBARA L. NEILSON  
Administrative Law Judge

Dated: February 6, 2013